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ABSTRACT

The 1977 National Assembly of the National Center for Higher Education Management Systems addressed specific aspects of excellence, diversity, and access to postsecondary education and suggested ways to preserve these values in planning, managing, and financing in the 1980's. The following conference papers are presented: "Placing Value Priorities into Practical Perspective," by Marvin Wachman; "Value Imperatives of Postsecondary Education of the 1980s: Triumph, Tragedy, or Trade-off?" by David L. Boren; "Diversity, Productivity, Excellence, and Access: Exploring the Horns of the Dilemma," by J. Russell Nelson; "Academic Progress and Stable Resources," by Richard M. Cyert; "Outcomes Planning: Solution or Dream?" by Howard R. Bowen; "Values and Analytical Models in Higher Education," by George B. Weathersby; "Postsecondary-Education Indicators: Can We Measure Our Value Imperatives--Access, Diversity, and Excellence?" by Carol Van Alstyne; "Pricing Our Values: What Needs Costing and What Is Without Price?" by David G. Brown; "The Tuition Advance Fund: A New Proposal for Funding Higher Education," by John Silber; "Financing Our Values: Considering Appropriate and Acceptable Trade-offs," by Glenn Terrell; "What Do We Do About It?" by William Ford; "Research That Will Help," by Patricia Graham; and "Getting Our Act Together (or How to Keep the Government from Playing the Featured Role)," by Charles B. Saunders, Jr. (SW)

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Planning, Managing, and Financing in the 1980s

Achieving Excellence, Diversity, And Access in the Context of Stable Resources and Demands For Increased Productivity

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1977 NCHEMS National Assembly

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National Center for Higher Education Management Systems

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Achieving Excellence, Diversity, And Access in the Context of Stable Resources and Demands For Increased Productivity

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Preface

The NCHEMS 1977 National Assembly was held in Denver, November 6-8. More than 300 educators, researchers, legislators, and agency executives, representing all sectors of postsecondary education, attended.

The Assembly took as its theme "Planning, Managing, and Financing in the 1980s: Achieving Excellence, Diversity, and Access in the Context of Stable Resources and Demands for Increased Productivity." Those values, long considered imperatives by faculty, students, and administrators alike, are under steady pressure from interests outside postsecondary education to give way in favor of increased efficiency. While each value can be advocated as more important than the others, reality calls for a delicate balance among them.

At the Assembly, leading figures in postsecondary education addressed specific aspects of excellence, diversity, and access and suggested ways of coping with the several dilemmas encountered by those seeking to preserve these values. The texts of their papers are included in these Proceedings.

Ben Lawrence
Executive Director
National Center for Higher Education
Management Systems

Placing Value Priorities Into Practical Perspective

Marvin Wachman
Chairperson, NCHEMS Board of Directors
President, Temple University

My task this morning is to make a charcoal sketch of some of the issues with which this 1977 National Assembly will be dealing in the next two days. The working title for my remarks is "Placing Value Priorities into Practical Perspective," which gives me some leeway and some hesitation. Whose perspective, for example?

It reminds me of the response given to a sportswriter last month by our ace relief pitcher in Philadelphia, Tug McGraw. The reporter very matter-of-factly asked Tug if he preferred grass or Astroturf. "I'm not sure," Tug replied thoughtfully. "I've never smoked Astroturf." Tug obviously had a different perspective on the question.

Faculty and administrators seem to have different perspectives when it comes to determining institutional priorities at a time of declining financial resources, changing demographic configurations, rising costs, and increased demands from both within and without the university for greater accountability and productivity.

Faculty and some administrators are understandably suspicious about management systems designed to improve efficiency and cut costs. In their excellent book, Quantitative Approaches to Higher Education Management: Potential, Limits, and Challenge, Ben Lawrence and Allan Service discussed this problem.

"There is a certain inherent resistance to quantitative approaches," they wrote, "(arising) from the impression that such approaches are oriented only toward things and pay no attention to people. In the higher-education environment, oriented so thoroughly to people and human values, this impression leads to a suspicion of quantitative approaches and a reluctance to believe they can contribute positively" (1977, p. 13).

Sometimes managers do lose sight of the human factor. I remember a conversation a number of years back between a student and one of our administrators. We were just starting a new computerized system in which every student was to be assigned a number. The student was arguing against this approach, saying that he felt that being reduced to a number was dehumanizing. "Dehumanizing?" our administrator asked incredulously, "Young man, what could be more personal than having your own number!"

The perspective that I bring to the problem of setting priorities is shared by many of you. I work at an urban institution which faces some hard and bitter decisions in the immediate future.

It is a tenet of human nature that we only begin to examine our priorities in earnest when the problems are most acute. You don't usually think about the need for an appendectomy until the symptoms which indicate that something is wrong appear. Twenty years ago, few people worried about the dwindling reserves of fossilized fuels. Now the setting of energy priorities is probably the most important subject of national debate.

And back in the 1950s and 1960s, when colleges and universities were expanding faster than they could accommodate change, supported with almost more public and private monies than they could use, few of us concerned ourselves with what would happen when the resources became scarce. Like Billy

Carter on a beer binge, we were heady with the importance of our mission and gave little or no thought to the hangover we faced in the morning.

But now the party is over, and we are gathered here this morning--quite soberly--to talk about such serious topics as retrenchment, cost-cutting, reducing expenditures and programs, and setting priorities based upon a sense of values.

There is a danger in tackling our new assignment in higher education, a danger not unlike the one which confronted us in a different way in the fifties and sixties. It is the danger of excess. We can rush into our task with a missionary zeal to be practical and a willingness to take some painful steps which promise quick, easy solutions to the major problems we face.

We know that an obese person can see quick results by existing on a liquid protein diet. But we also know that the same person may be doing serious, long-term harm to his health while he is shedding pounds.

At the same time, colleges and universities which do not take into consideration the long-range implications of their short-term decisions may be doing serious harm to themselves and to their graduates.

In education, as in almost any other endeavor, it takes a long time to build up a reputation for quality. We all know what President Lowell of Harvard once said when he was asked what made a university great. "Three hundred years" was his terse reply.

The second point was well made in another way by Ben Lawrence and Allan Service.

"The manager," they wrote, "must never lose sight of the fact that management is only a means to an end--an important means, to be sure, but it is still only a means. Learning is the goal" (1977, p. 11).

They go on to point out that managing an institution most effectively means synthesizing the duality of human values and dollars and cents. "The creativity of this synthesis," the authors stated, "is the fundamental measure of a higher-education manager's effectiveness" (1977, p. 12).

Higher education must do its job at the least possible cost. But it must also be effective. All of us--faculty, administrators, trustees, legislators, and the public--must never forget that higher education is the only formal mechanism we have for the formation of human and intellectual capital, without which society could not maintain quality in its leadership and creativity in the efforts to reach its goals.

Colleges and universities are very sensitive, almost fragile, institutions. Tampering with their structure should be approached with the same caution as the scientist entering the laboratory to conduct experiments in recombinant DNA. It is a task which could and must be done under the present circumstances, but not without some very well reasoned safeguards.

Trading off some of the long-standing values of higher education for the benefit of short-term considerations could mean that thousands of graduates would be deprived of an important part of their education.

Similarly, a university may make a serious mistake in reducing or eliminating programs or colleges which appear to be job related, but in areas where manpower needs have declined. The danger here, of course, is that of following the type of panic which occurred a half-dozen years ago when the aerospace industry started winding down, and it was thought that we had an oversupply of engineers. The result has been rather an undersupply in the last several years, and currently.

In developing aids for planning and management, NCHEMS must help the administrator assess the trade-offs in terms of effectiveness as well as efficiency. In other words, we must provide the methods which help the manager synthesize the world of human values and of quality and the world of fiscal reality. Also, we must provide the tools so that the academic managers can measure short-term and long-term results, compare them, and make reasonable decisions.

Even this synthesis is not the total answer to the setting of priorities, for one person's highest priority might be another person's lowest. I am reminded here of another baseball story.

The veteran Charlie Grimm was managing the Chicago Cubs one year when they couldn't hit the sizes of their hats and had sunk deep into the National League cellar. One evening a Chicago Cub scout phoned excitedly from some crossroads in Nebraska and said, "Boss, I've just stumbled onto a great young pitcher. This afternoon the kid pitched a perfect game. Twenty-seven strikeouts in a row! Nobody even touched the ball till a guy hit a foul in the last inning. The kid's with me right now. Shall I sign him up?"

"No," Grimm said. "Sign up the guy who got the foul. We need hitters." It all depends on your priorities.

I am always a bit embarrassed by show-and-tell speakers, but at the same time, it is obviously best to talk about what one knows (the Triest principle). At Temple University, one of our most urgent priorities has been reducing the annual deficit at our Hospital. This deficit is caused primarily because we have the busiest emergency room in Philadelphia and because we treat thousands of persons who cannot pay for their care or can pay only a small portion of the total cost. To the poor blacks, Spanish-speaking, and whites of North Philadelphia, Temple University Hospital is the only family physician they have. Last year, we managed to reduce our deficit, caused by providing unreimbursed patient care, from $4.2 million to about $2.5 million. We will probably never be able to completely eliminate this deficit, and our only hope is for the state legislature to recognize that this is simply another cost of doing business and allocate extra funds for it. For the past two years, they have recognized this responsibility. The Hospital is a clear example of where human values far outweigh fiscal realities.

Other factors which affect us and which put limits on our abilities to deal with the dollar-and-cents realities of higher education include tenure considerations, affirmative-action programs, and unionization, including that of the faculty.

Unionization has drastically altered our campuses. Pennsylvania has a public employees relations act which was passed in 1970. At that time, there were 2 unions at Temple University. Today we have 17 (14 plus 3 meet-and-discuss). Practically everyone belongs to a collective-bargaining organization except me. Any discussion of possible retrenchment would involve our faculty union, the AAUP, and it would raise all sorts of questions about affirmative action and the impact of wholesale terminations on women and minorities.

No effort to set institutional priorities, while seeking to combine human values as well as financial realities, can be accomplished in a vacuum. The full use of participatory mechanisms is necessary in most institutions. It certainly is in mine. There is a vast difference in setting priorities today, compared with the way one could have acted 10 or 15 years ago. In my institution, and perhaps in some of yours, if you do not have the mechanisms for faculty and student participation, or if you do not use them, the setting of goals and priorities deteriorates into nothing more than rhetoric, or the effort can tear the institution apart as the scramble begins to preserve as much individual turf as possible.

At Temple, we have taken several steps to insure wide participation. One was the establishment almost four years ago of a Commission on the Future of the University, a broadly representative group which focused on such questions as access, educational programs, our public-service responsibilities, and the organization of the University.

We have also shared more information than ever before with the faculty senate. We even extended our good faith by disclosing administrative salaries to the senate's Budget Review Committee. Some faculty were surprised to learn that not all administrators are getting rich, and many were earning less than they were, even though the administrators worked the full fiscal year. The faculty Budget Review Committee held 26 meetings last year, involving the 16 schools and colleges of the University and the units directly under our vice-presidents and myself. In addition, each department and college was asked to set its own priorities--again, from its perspective--after taking into consideration a statement I prepared on the total University goals and priorities--from my perspective.

When you get down to the nitty-gritty of talking about reducing or eliminating high-cost programs, you move the stage outside the University. Our programs which involve the highest costs include the medical school, the Hospital, the dental school, social administration, music, art, allied health, pharmacy, and communications, especially radio-television-film. At a public institution, as well as others, eliminating or reducing such programs becomes a public question, particularly because some of the schools I mentioned are most closely related to the "delivery systems" which society needs for health care, social stability, and the like.

Reaching difficult decisions such as these requires the cooperation of all members of the campus community and in some cases the public at large. And the decisions will be more acceptable and more tolerable if there has been wide participation by the various constituencies.

In the years ahead, faculty and staff (and students as well in some cases) will have to pursue academic and budget goals with some determination and with understanding of the need for synthesis. We will have to continue learning how to become more efficient and productive while at the same time never forgetting our most precious goal, quality learning. I hope that NCHEMS as a research and development center will provide some of the instruments, approaches, and products which will assist us to that end. And I trust that this National Assembly will be helpful and enjoyable for all of you.

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Lawrence, G. Ben, and Service, Allan L., ed. Quantitative Approaches to Higher Education Management: Potential, Limits, and Challenge. ERIC/Higher Education Research Report No. 4. Washington, D.C.: American Association for Higher Education, 1977.

Value Imperatives of Postsecondary Education of the 1980s: Triumph, Tragedy, or Trade-off?

David L. Boren
Governor
State of Oklahoma

We have succeeded in promoting efficiency in higher education. We have demonstrated that managerial science can be applied to the educational as well as to the private sector. Furthermore, even though enrollments and the percentage of public support for higher education have leveled off, we have made some progress. In Oklahoma, for example, there has been a 70 percent increase over the past three years in funding for higher education. Indeed, 82 percent of all additional funds generated in the state over the past three years has been on education. However, we all must recognize that we are entering a period of economic difficulties. Nationally, our trade deficit this year will likely be over $30 billion. This year, there will also be over 12,000 farm foreclosures and bankruptcies, the highest number of failures since the Depression. The cost of energy and other resources will continue to rise. Thus the competition for public funds will become more intense.

How can we best help colleges and universities in this period? We can, of course, try to help them achieve their objectives more effectively, efficiently, and economically. But first, we must determine what those objectives are. We must not let the concept of cost-effectiveness, for example, determine what it is we should be doing in the first place. Recently I attended a meeting of regional groups on the equitable distribution of federal funds. One speaker argued that the focus of the meeting should be the devising of proper formulas for the distribution of funds. But before we can devise formulas to solve problems, we must first determine what the problems are.

A major reason we have such difficulty in agreeing on the nature of our problems is the overspecialization that afflicts our culture. George Bernard Shaw once defined a profession as a conspiracy against the laity. The most important thing we can do for higher education is to keep it from becoming such a profession, one preserving itself at the expense of society. There is in this country a collapse of community, a failure to listen and understand. Polarization, specialization, and fragmentation are growing. We are splitting apart into a myriad of professional, economic, geographical, political, and other interest groups, so that the old spirit that once produced a consensus to solve a problem has been lost. As a result, we suffer from a paralysis of decisionmaking. No wonder we have an energy problem, when, for example, it takes an average of 14 years from the time that a permit for a power plant is applied for until the permit is actually issued. Of course, such decisions should be open to comment and criticism. We must consider all implications of such decisions, especially those regarding health, safety, and the environment. But we must also be able to decide and act effectively. Recently I complained to the Secretary of Transportation that the average time it takes to decide whether to build a highway--84 months--has created a political crisis for governors. You promise a road, you secure the funds, and the governor who serves three terms after you gets to cut the ribbon. Eighty-four months before a decision is made on a request! At the heart of this problem lies the collapse of community. Consider local and state government. Every group is organizing, and usually each claims, with some justification, that it is doing so in self-defense. The policemen organize for a fairer wage. If they succeed, the firemen follow, and then come the sanitation workers, and on and on.

Many of these groups hate to see it happen. Leaders of various interest groups have in effect said to me: "We really don't want to be pushy; we really don't want to feel like we're just another group after its own self-interest, but we have to organize for self-protection, because everybody else is doing so." In the midst of such discussions, I sometimes recall an institution as old as our country, the New England town meeting. I think of all those people coming together to determine what was best for the community and to make policies for the coming year. And as I listen to the demands of the various interest groups, all so aware of their own problems and needs and so unaware of the resources and needs of the community, I wonder that if we held a town meeting today, who would stand up and say, "I'd like to speak a word for everybody; I'd like to speak a word about what's fairest; I'd like to speak for the community." Would anyone? Or would our town meeting collapse, with each group speaking only for its own interest, with no consensus achieved?

Unfortunately, I suspect that would happen. At the heart of our political system lies a basic inconsistency that we don't mention very often. We say we believe in two competing principles: majority rule, and natural rights that not even the majority can take away. Our political philosophy, in other words, stems from Locke as well as Rousseau. And yet, somehow we've been able to live for over 200 years with this inconsistency. We believe in majority rule, but at the same time, we don't believe that we can trust the majority not to overstep its bounds. Hence the Supreme Court has always been one of the most controversial of our political institutions since it tries to reconcile this inconsistency. Nevertheless, we have been able to live together as a nation, because we've operated according to what Rousseau termed the general will. The general will is not a numerical or electoral majority; rather, it is a fair-minded one, a majority of persons who vote only after carefully considering the rights and needs of others, rights and needs that might even conflict with their own. And it is only because we have had a fair, informed majority, one that could empathize with people in all parts of the country, in all occupations, and in all groups, that our system has worked.

But where is that majority today? I get so frustrated when I go to Washington to testify about agricultural or energy matters. I once pointed out to a Senate committee that we depended on imports for almost 50 percent of our oil, and that if there were a shutdown, within four months we would be on a White House rationing plan giving us each eight gallons of gas a week. I also pointed out that our trade deficit would worsen if we relied on $4 Algerian gas rather than deregulated, domestic gas that might rise to $2.50 in places like Texas or Oklahoma. I told the senators about a University of North Carolina study that shows consumers will spend $123 billion more by the year 2000 if we rely on foreign petroleum instead of developing domestic energy sources, including solar energy. And when I finished what I sincerely believed to be a statement in the national interest, the committee chairman looked down at me and said, "Governor, you've done a fine job in speaking from the Oklahoma view in this matter." I might as well have called myself Sheik Boren from Oklapek.

We no longer listen to one another. We've become too polarized, and even when we try to speak from what we think is a national perspective, we have difficulty. So who will speak for the community? This question suggests to me what we should be doing in higher education. Within education itself, we have interest groups. Higher education competes with vocational-technical education. On virtually every campus, departments and courses compete for students. And some say that we cannot afford to "overeducate" people, that we need to be cost-effective by educating people in ways that will immediately increase their incomes when they graduate and that will enable them to supply needed, specialized skills. When we began educating people in this country, we first educated teachers and ministers. We had no goal of increasing their incomes. We never imagined that the pulpit and the classroom were roads to wealth. When Abraham Lincoln read the Bible or Shakespeare, I don't believe he did so to further his career, though probably there have been men who have been elected president of the United States without studying either one. But I would hardly say that the nation suffered from Lincoln being "overeducated." How ironic, if we became the most highly specialized and developed people in history and yet were destroyed from within by ignorance of the core of civilized knowledge, of our own history, indeed, of our own humanity. Such remarks may seem strange to a group concerned with cost-effectiveness. But if we examine the needs of the country, the greatest service that higher education can perform is to transmit the core of civilized knowledge. In a world that has become more and more specialized, the need is greater than ever for the liberal arts and a liberal education. For only through the liberal arts can we shape men and women who, when they leave our institutions, can stand up at that town meeting and say, "I'd like to speak a few words for the community." The last thing we should do is to allow our colleges to be perverted into specialized-skill training centers, incapable of transmitting to people knowledge of themselves, their histories, and their communities.

Thus our primary task is to preserve an excellent, broadly based curriculum, while continuing to serve the other needs of the community. We can do so only by becoming more effective and efficient in serving those other needs. First, we have to determine areas of specialization for our colleges and universities, particularly in graduate studies. We simply cannot offer everything across the board. Here some of the NCHEMS studies have been especially valuable in revealing the cost of program duplication in higher-education systems. In Oklahoma, we are blessed with an abundance of state-supported institutions of higher learning. We are blessed with some in the wrong place at the wrong time, but we are blessed. However, we simply cannot afford duplication of programs. The notion that we enhance the prestige of a university by offering graduate programs in every field of endeavor cannot continue. Despite political pressures, we cannot afford, for example, an unlimited number of business, law, or medical schools.

The pressure for more course areas is even greater. At a time when we are financially strapped, I encounter two or three hundred requests for new programs every year. I am not suggesting that we declare that the curriculum of 1960 is going to be the curriculum forever because it had some magic about it, any more than we should say that the King James version is the only Bible that should ever be read. However, before we start new programs, we should examine the ones we offer and realize that we just can't keep adding indefinitely without subtracting, too. There may well be obsolete programs that should not be continued. To make these kinds of hard decisions, we must abandon the notion that the prestige of an institution depends on the number of graduate programs it offers. We cannot afford that notion any longer. Let us measure prestige by the quality, not quantity, of programs.

Liberal arts must remain our priority. However, once we have educated undergraduates in the liberal arts, we must then determine what skills are needed by society, and we can't always look at what is most cost-effective. We can't always just look at the number of credit hours produced per dollar: we must also look at quality. One of the great tragedies of education in this country is that for too long, we have based appropriations on such items as student head count, without giving our colleges and universities the flexibility to build programs of excellence. As a result, we have become a tribe of self-interested headhunters, playing the numbers game to sustain ourselves. However difficult it may be, we must measure excellence as well as economic effectiveness. The alternative is to continue offering more, and more specialized, programs. If we are to survive on stable budgets and stable enrollments, and if we want to innovate where innovation is genuinely needed, then we must set priorities. Setting priorities doesn't mean starting new programs. It means reshuffling dollars, so that some get less. So let's decide where we're going to specialize, not only on the basis of credit hours, but also on the basis of where we have a chance to foster excellence. That chance depends on faculty resources as well as local needs. Where do we have superior faculty? Who's already there? Some departments are already excellent. Nurture them.

We must also overcome the brick-and-mortar syndrome. Donors love to see their names on buildings. How many times have we heard alumni say, "My, our university is doing well. When I was there, they had 5,000 students, and now they've got 15,000, and they've got 27 new buildings." Presidents recite these statistics as if they were indications of great progress. In Oklahoma, there is a request before the legislature for a $300 million bond issue. Yet we have had new buildings we could not afford to move into, because we lacked funds to pay the utility bills for the next six months. There are, of course, valid brick-and-mortar needs. But it's the quality of what goes on inside the building that's important, not the building itself. Somehow we have to convince our alumni that having a chair named after them might be more prestigious than a building. We will destroy our higher-education system if we continue for the next 5 or 10 years to try to gain prestige through new construction.

We must realize that with limited resources, we're going to have to quit protecting some of our vested interests. In Oklahoma, there is a new educational council: the chancellor of higher education, the head of vocational-technical education, and the head of elementary education all meet in the same room. That's never happened since statehood; before, they talked to each other through attorneys in court. Our colleges of education are a prime example of protecting the status quo too long. In our state, we produce about 50 percent more teacher graduates than we can absorb. Have we raised standards for admission into teacher education programs? I suspect that in most states, if a student cannot get into premedicine, prelaw, prenursing, or some other preprofessional program, then he or she goes into teacher training. That is obviously a misdirection of resources, but the colleges of education are entrenched. There is a tremendous need in elementary and secondary schools for new ideas and new approaches. Schools need to be shaken up with new thinking. Higher education, however, has failed to meet the in-service training needs of elementary and secondary teachers, because the faculties of our colleges of education are chained to their desks, training 50 percent more teachers than we need. Rather than keeping standards low to protect the status quo, we should raise them and send our faculties into the field where they can use their talents.

We have to adjust to a new market and a new concept of education. The old notion that a person first goes to school, then works, and eventually retires is no longer true. More students take time out of school to work, or work while in school. Women who were college age at a time when it was not thought important for women to be educated are now enrolling in classes, as are retired persons. Over 50 percent of all students in higher education today attend school part-time. We must respond to the needs of those people.

But our response should not be to throw out liberal education, to make our colleges and universities glorified training institutes. Instead, we should liberally educate those people, enable them to realize their potentials, make them more aware of their own humanity. When we get a man who during the day works as a mechanic to study at night the poetry of John Donne or the political philosophers of the eighteenth century, we're not only preserving faculty positions, we're enriching the fabric of our society: we are recreating the spirit of community, of wholeness, that we have been losing through our specialization.

We have to change our thinking about tenure. We all know what happens to institutions whose academic departments are 80 or 90 percent life-tenured: they have no room for bright graduates with new ideas. As a tenured faculty member on leave myself, I am aware of the need for job security. But we should go to long-term, not lifetime, contracts. Perhaps a five-year contract, with a one-year extension if the contract were not renewed, would be feasible. We must preserve academic freedom, but we cannot allow ourselves to become calcified. One of the most vivid truths of this age, as Margaret Mead has observed, is that no one will live all his life in the world in which he was born, and no one will die in the world in which he worked in his maturity. How ironic that we are so frightened at the thought that we might not for every day of our adult working lives walk into the same classroom and teach the same course in the same way. We talk about the need for everybody to be retrained and to be able to do other things--except ourselves.

The kinds of adjustments I've described will require close relationships with political leaders. I have viewed these relationships from both sides and know how painful establishing them can be. To establish them, we will need people who can translate the specialized languages of academic institutions into the language understood by politicians and the public. In the Oklahoma legislature, I once served on the Environmental Protection Committee. We often had to make decisions that should have been based on technical, specialized knowledge we lacked. I remember a debate on whether we should ban phosphates. There were experts in our colleges and universities. But no one even thought about getting their opinions. Instead, we exchanged highly informed comments, such as "does Duz really get it cleaner? What does your wife think?" The misunderstanding between academics and politicians is tragic. The former regard the latter as opportunistic vote-getters; the latter regard the former as impractical eggheads. I never realized, until I started to work with politicians, how insecure they are. They fear that academics will think that they are uninformed and unintelligent. They are almost afraid to ask questions. Somehow, we need to overcome those fears and bridge the gap; there is nothing more effective at appropriations time. In Oklahoma, we have contact people in all our universities.

When a legislative group needs information on a particular problem, a coordinator puts it in touch with the appropriate people in that field in higher education.

I applaud you for bringing into higher education the whole concept of management techniques. We need that kind of training. But don't ever permit the numerical neatness and symmetry of those techniques to obscure the larger question of values. We must ask what we should be doing before we can determine the best way of doing it. Higher education has become so fascinated with the narrow, utilitarian, dollar-oriented approach that we are becoming a nation of illiterate, tunnel-visioned specialists who understand neither our history nor our humanity. Aristotle was once asked the difference between an educated and an uneducated person. He replied: the same as the difference between being alive and being dead. That must still be our purpose in higher education--to produce people fully alive to all the opportunities at their command. For 200 years, we have been imaginative and empathetic enough to live together as a nation, to reconcile majority rule and natural rights, Rousseau and Locke. But if we are to continue, voices that speak for the community must be heard above the clamor of competing interests. And when the question is asked, "Who will speak for the community?" we can then answer, "Our graduates."

Diversity, Productivity, Excellence, and Access: Exploring the Horns of the Dilemma

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If one accepts tradition and the rhetoric of educational spokespersons, diversity and excellence are highly prized within higher education. At the same time, however, there is a national effort, rooted in the public conviction of its rightness and supported by a growing body of state and federal law, to remove the barriers that have inhibited access by various groups to higher education. Moreover, in public institutions, there is a general demand from state legislatures for increased productivity, and the need to enhance productivity has become a matter of extreme necessity in many institutions as well.

Although productivity and access are positive goals themselves, they frequently challenge the more traditional goals, namely diversity and excellence. Improved access may, for example, permit unqualified persons to enter, and perhaps complete courses of study, thereby undermining academic standards. Productivity increases may be achieved in the public sector through the appropriation process, which can homogenize programs by funding them as if they were similar when they are not. The dilemma faced by each postsecondary institution, then, is to preserve and enhance the values most important to it in the face of competing demands, which, if met, may erode those values, and if not complied with, may induce a variety of retaliatory actions by agencies and groups with other goals.

To provide a context for developing guidelines to cope with these several goals, let us first review briefly each of the concepts--diversity, excellence, productivity, and access. It is worth noting at the outset that diversity and excellence are goals set by people within institutions, while increased productivity and improved access tend to be imposed upon institutions from the outside. Thus although each may become an institutional goal, they are not formulated in the same way or by the same people, nor are they perceived by people within institutions as promising equally important benefits to higher education.

DIVERSITY

Diversity in higher education can be defined as the existence of an array of institutions that are significantly different from one another. These differences may be due to the size of the student body, the range of academic programs offered, the nature of the faculty, the sponsorship of the institution, the purpose for which it was established, the admission policies, the character of the curriculum, and other factors.

The history of American higher education reveals a cycle[1] from conformity to diversity and back toward conformity. The colonial liberal-arts colleges were similar and modeled after the British system. In the mid-nineteenth century, increased industrialization and the demand for broader access and more practical higher education resulted in the establishment of new kinds of institutions. These new institutions, which flourished for the next 100 years, included state universities, women's colleges, vocational schools, teachers' colleges, military schools, and junior colleges.

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[1] This discussion of the diversity-conformity cycle relies heavily on chapter 1 of C. Robert Pace, The Demise of Diversity: A Comparative Profile of Eight Types of Institutions, (Berkeley: Carnegie Commission on Higher Education, 1974).

In the past 25 years, however, a trend toward greater conformity has become evident. Traditionally, specialized schools have expanded in many different directions. Two-year colleges have become four-year colleges, four-year colleges have begun offering graduate programs, teachers' colleges have become state colleges, and state colleges have become state universities. One writer has aptly described this drive toward similarity--the desire of even the smallest college to become a major university--by imagining each institution's aspiration as "someday we'll play in the Rose Bowl."

The decline in diversity can be attributed to four principal influences.

Growth in public higher education. While enrollment in public and private postsecondary institutions was about equal in 1950, today three times as many students are enrolled in public institutions as in private institutions. This means that institutions which were probably the least distinctive in the beginning have achieved the greatest enrollment growth.

Shifts in funding. State tax dollars and federal research dollars have become the dominant sources of support in higher education. As the burden for funding higher education has fallen more heavily on the public, the opportunities for diversity which private funding affords have declined.

Failure to define institutional purpose. The key to diversity is an institutional effort to differentiate itself in some significant way from other institutions. To do this requires a clear sense of purpose, a conviction that the purpose is valid, and a willingness to stick to that purpose. Too few institutions have been able to achieve this clarity and commitment in recent years.

Desire for prestige. Unfortunately, prestige frequently is conferred upon educational institutions for reasons having little to do with institutional purpose. Because prestige for all but the very best institutions tends to be related to factors such as size, breadth of offerings, existence of graduate programs, and the like, it is easy to allow pressures from both inside and outside to move a school toward these objectives of magnitude rather than to maintain its original educational objectives.

Most of us say that we place a premium on diversity in higher education, because it provides choices for consumers of educational services, the students. We can, however, see a trend away from diversity in our higher-education system in recent years. We can also see that little or nothing has been done to reverse this trend, despite the widespread belief that diversity is vital to higher education.

EXCELLENCE

Excellence in higher education is traditionally associated with outstanding or superior students, faculty, academic programs, or research activity. Usually, excellence involves all of these. A reputation for excellence is highly prized by an institution, since it helps attract those resources which will foster continued excellence.

All of us are aware of the acknowledged centers of excellence in higher education--the Ivy League schools of the East, numerous small private colleges scattered throughout the country, and certain prominent state universities. But we need to recognize that this concept of excellence is narrow and can be applied fairly only to certain limited segments of the higher-education system. Moreover, the narrowness of the definition has probably had a negative effect upon the overall quality of higher education in the United States.

In my remarks on diversity, I pointed out that many institutions have tried to emulate the traditional model of excellence by mimicking the characteristics of supposedly excellent schools rather than striving to achieve their own objectives. The effort to conform to a single model has not only led to a decline in diversity, but it has also had a leveling effect upon excellence in higher education. The once excellent teachers' college has become an average state college; the once great vocational school has become a mediocre four-year college, lacking a clear-cut focus for its programs.

Excellence clearly needs a broader definition than that traditionally employed. The traditional definition emphasizes the raw materials of education--the quality of the faculty and students as measured in certain ways, and the volume of research. A more appropriate definition would focus on the quality of the educational results--the extent to which the institution fulfills its goals and objectives. In this context, a community college may be a "center of excellence" for preparing students who may be ineligible for or prefer not to enter a university; a vocational school may be a "center of excellence" for preparing students for technical careers; and an urban college may be a "center of excellence" for providing programs that respond to local community needs and problems.

This broader definition implies that excellence can be a goal of each institution and there are as many opportunities for excellence as there are for diversity. It also implies, however, that the distinctive roles of our institutions must be clearly stated and widely supported in order to slow down the rush toward sameness and mediocrity.

PRODUCTIVITY

Productivity is a measure of the relationship between resources consumed and output in a production process. The use of the concept productivity in discussions of higher education is a relatively recent phenomenon and reflects public concern about the high cost of education. In the public sector, the need to demonstrate high and, preferably, rising productivity has become crucial in obtaining additional state support. In the private sector, increased productivity is frequently crucial to institutional survival.

In one sense, educational institutions do have all the components of an industrial production unit: raw materials--students; a labor force--faculty and staff; production instruments--classrooms and laboratories; production schedules--requirements for graduation, semesters, and such; management--administration and governing boards; production costs--the cost per student or credit hour.[2] But most educators' teeth are set on edge by discussions of productivity, because of their view that educational institutions are places where human potential is developed and that the processes by which such development is achieved are too subtle to be measured quantitatively.

At the same time, few people would argue that there is no room for increased productivity in higher education. Indeed, in recent years many institutions have been forced by financial necessity to do more for less. The basic technique used to increase productivity is to increase the number of students using a particular resource with a resultant decrease in unit cost. This may involve eliminating courses with small enrollments, sharing facilities with other institutions, increasing class size, or eliminating entire institutions that are too small to operate economically.

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[2] Harold L. Enarson, "University or Knowledge Factory?" Science 181 (September 1973): 897.

The use of computers, television, and other instructional innovations can also increase productivity. These approaches supplement or replace faculty members with machines. Other instructional arrangements which increase productivity include accelerated programs, whereby students complete their programs in three instead of four years; the use of credit by examination to fulfill course requirements; and the use of off-campus resources for part of the student's educational experience, as in work-study programs. External degree programs appear to increase productivity dramatically.

However, productivity must be addressed along with quality. Although experiments have shown that performance on final examinations is independent of class size and instructional technique, the goals of our educational system have always involved more than the ability to recall information. Traditionally, we have conceived of education as a maturing and moral experience, accomplished by the exposure of students to fine minds at work in settings which encourage exploration of differing points of view. In part, the demand to increase productivity reflects a lack of public understanding of the goals of education, and we bear the responsibility for having emphasized the utilitarian benefits of good jobs and high incomes.

ACCESS

Access in higher education means the right to enter and use the services of educational institutions. It involves the issues of how many students, which students, and how access is provided.

How many students? The development of higher education in the United States has been guided for at least a century by the principle of broad access. In recent years, however, the desirability of widespread higher education has been challenged because of the rising costs of higher education; the fact that higher education no longer guarantees a good career, financial security, and upward social mobility; and the failure of higher education to define its goals in a convincing way.

The greater visibility of the costs of education in family as well as government budgets has raised two questions: "Is a college education really necessary?" and "Are we sending too many people to college?" These questions have become more pointed with the fading of education's traditional promise that a good education means a good job. And no new goals have been set forth to renew public interest and support for widespread higher education.

The questions of how many people should have access to higher education can only be answered when the goals of higher education are understood and supported by the public. If our goal is primarily to prepare students for careers, then many sectors of higher education probably are overbuilt.

Which students? The second aspect of access is who should have access. This issue has received much attention in recent months with the Bakke and similar cases, which challenge the basis of special admission programs. Over the years, higher education has opened its doors to more and more people from various backgrounds and with different abilities. Especially in the last 5 to 10 years, great emphasis has been placed on providing access to those previously denied it--minorities, the handicapped, women, and senior citizens.

It is remarkable that these efforts are being challenged by both those for whom they were designed and those outside the programs. Minorities and others have challenged conventional methods of testing academic competence, asserting that standard measures are culturally biased. Those outside the programs charge reverse discrimination and a lowering of standards for certain groups. In spite of these problems, however, it is clear that higher education must maintain and strengthen its commitment to equal access while insuring that valid academic standards are maintained.

How to provide access? The third aspect of access, that is, how to provide it, has probably received less attention than the questions of how many and who. Yet it is perhaps the most important aspect, for the way in which access is provided frequently determines the quality of the student's experience. It is not enough to say we will provide education for x number of students representing y number of socioeconomic groups; we must also provide ways of access that meet the needs of these groups and the individuals within them.

This question must be addressed by asking how we can best prepare students to reap the greatest benefits from our educational system. Some of the responsibility falls upon the primary and secondary schools to provide basic academic skills. But higher education must also assume responsibility to develop a well-defined and coordinated system of higher education--including vocational schools, community colleges, four-year colleges, and universities--that provides logical and reasonable paths of access through the various levels and sectors of higher education in response to the individual student's needs.

We must, as Adlai Stevenson once observed, "reserve the element of quality in our . . . pursuit of equality. We must not, in opening schools to everyone, confuse the idea that all should have equal chances with the notion that all have equal endowments."

Having placed these four terms in a context, how then can we resolve the dilemma? I have no panacea, and do not know anyone who does. But the following are certainly elements of any attempt at a resolution.

- First, higher-education institutions need to recognize, in their behavior, the value ascribed to diversity in our words by taking actions to emphasize their distinctiveness.

- Second, educators need to redefine excellence to take into account different institutional purposes as well as traditional measures of the quality of educational "raw materials."

- Third, we need to relate to each other, and our institutions, in ways that show we value the ability to define, pursue, and achieve diverse objectives as much as we respect the standing of an elite few.

- Fourth, we must, convincingly, describe to the public the responsibility of higher education to develop the intellectual, cultural, and moral values of students, in order to reduce the current emphasis upon the purely utilitarian, while at the same time, taking whatever steps we can to increase the efficiency with which we employ the resources available to us.

- Fifth, while taking steps to provide improved access to education, we must encourage students to select those opportunities best suited to their interests and abilities.

- Sixth, we must develop ways to assess potential that do not exclude people of ability because of limitations in their vocabulary or experience.

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Academic Progress and Stable Resources

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One of the important factors in university planning today is the possible decrease in enrollments during the 1980s. A recent publication states, "Higher education in the United States has grown throughout most of its 340 years. Now it faces a quarter of a century of little growth or no growth in enrollments for the first time in history."[1] Since the students of the 1980s were born in the 1960s, there is little uncertainty connected with such predictions. The percentage of high-school graduates going on to higher education might increase enough to compensate for the smaller number of graduates, but there is no reason to expect that kind of change. For the purposes of this paper, let us assume that the proportion of high-school graduates electing higher education does not increase. Let us also assume that

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1. Carnegie Foundation for the Advancement of Teaching, The States and Higher Education (San Francisco: Jossey-Bass, 1976), p. 5.

the movement to stress adult education and other types of continuing-education movements will not be a significant financial factor for most institutions. With these assumptions, it is fair to expect education to contract for at least the next 15 to 20 years.

This consideration leads to questions about the ability of universities to perform their educational, research, and social functions when they are decreasing or remaining constant in size. We get little help from the literature on organization theory or management, since an implicit assumption is made in both disciplines that the organization is expanding or is interested in expanding. This bias comes from the concentration on the business firm, where the motivation is always for increasing sales, increasing production, and increasing profits. The problem is to demonstrate how universities that are contracting can achieve excellence in education and research, maintain a diversity of programs and students, develop educational innovations, establish greater access among minorities and the disadvantaged, and at the same time, reach a fiscal equilibrium that continues the viability of the organization. Obviously, this problem is of no small order. As a first step, let us look briefly at the characteristics of a contracting organization.

ORGANIZATIONAL CHARACTERISTICS

Universities by their nature are difficult to manage under the best of conditions. They are decentralized organizations in which colleges, departments, and faculty members are the organizational units. The product is a service that is delivered by a faculty member under conditions that make it improper for a manager to observe the delivery of the service. The traditions of academic freedom guarantee the inviolability of the classroom. Thus the academic manager--department head, dean, provost, president--will discover problems with the delivery of the product only through the complaints of the student, who is paying to receive the service.

The faculty member not only has independence in the classroom but also gains additional independence, because he is a source of revenue to the organization through his research efforts. By getting outside grants, he pays for part of his salary and part of the overhead expense of the university. If indefinite tenure is added to the other elements of independence, it can be seen that the concept of "managing a faculty member" can be difficult.

Deans and department heads, being faculty members, can have the same independence. In addition, by building a political base with their department or college, they can acquire some independence for their administrative jobs.

In short, the university lacks, to a great extent, the elements of authority inherent in the business organization. The hierarchical structure exists but does not carry the same meaning with respect to the reward system or to the roles of subordinates.

When the organization is functioning effectively, as measured along educational, research, and fiscal dimensions, the structure may present little difficulty, because only limited central action is necessary. The situation is quite different when a contraction in size is forced on the organization, and it becomes clear that the central administration must take action. The contracting process brings with it conflicts of all kinds.

ORGANIZATIONAL PARTICIPANTS

Everyone concerned with organizations in our society needs to readjust his thinking with respect to the criterion of success. The nature of a market economy makes growth a measure of success. Any organization producing products that are satisfying the market will tend to grow; those organizations that are not will tend to shrink. Thus we are inculcated by the market system with the idea that growth is good and comes to those organizations that are doing the right things. Further, growth is a creative force in the society. It produces new opportunities for participants in the organization, as well as for other members of the society. Some of the beauties of an expanding organization can be understood from the following description.

> Even a moderate rate of growth in an organization may produce as many (or more) promotional opportunities as are provided by normal replacement--at least in the short run. Even a five percent annual growth may double the annual number of promotions that can be made at each level. This will probably have the effect of (a) increasing each employee's chances of reaching the higher positions, and (b) reducing the average age at which promotions are made. As a result of the growth, larger numbers of employees will also have to be brought in at the lower levels, hence increasing the competition for promotion

> after the initial impetus has been spent--but still retaining promotional opportunities at a higher level than in a static organization.[2]

For any given organization, the opportunity for promotion for participants decreases as the rate of growth decreases. This reduction in the opportunities for promotion is, perhaps, the most difficult element to manage in a contracting organization. The low probabilities of progressing in the organization considerably decrease the organization's ability to attract first-rate participants into the organization. This difficulty is compounded when there are organizations in the society that are in an expansionary phase. When an organization is unable to attract outstanding new participants, it suffers a reduction in the input of new ideas and in the supply of future leaders. As a result, the cadre of experienced people available for promotion to the top positions in the organization may not contain the number of high-quality individuals desired. The university may be forced to look outside for individuals for top professorships, for example. Thus the probability of attaining a top post for those within the organization is reduced further, and the job of attracting bright young people into the organization is made even more difficult.

In fact, the vicious circle in which one action leads to a second and to a third, all of which are detrimental to the organization, is a characteristic of a contracting organization that the university community must try to avoid. The trick of managing the contracting organization is to break the vicious circle which tends to lead to disintegration of the organization. Management must develop counter forces which will allow the organization to maintain viability.

FINANCIAL DETERIORATION

A good example of the vicious circle exists in the financial problems inherent in the private university. The university begins to suffer financial reverses, because of a decrease in the student body, and its only recourse is to increase tuition. An increase in tuition itself will eventually lead to a further deterioration in the number of students coming, and so a vicious circle begins. Other examples can easily be adduced. In order to justify a higher tuition, the private university must achieve a level of greater excellence than the public university. To reduce costs, university managers reduce the number of outstanding new faculty hired. Then gradually, the university's excellence will deteriorate and it will no longer be in the position to justify the higher tuition cost.

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[2] H. A. Simon, D. W. Smithburg, and V. A. Thompson, Public Administration (New York: Knopf, 1950), p. 345.

The problems of a university that is not growing are exacerbated when one postulates an inflation rate of 5 to 7 percent within the environment. The inflation factor means that the organization must continue to get an increase in its total revenues equal to the rate of inflation if it is to achieve a constant dollar equilibrium. It is clear that economies due to management cannot achieve continued savings. Inflation means that certain expenses continue to increase and that the organization can meet them only by acquiring additional revenue. If the revenue is not acquired, the university must eventually close its doors. If the revenue is acquired by continued tuition increases, it is likely that the organization will be forced into a vicious circle of the kind described. This analysis, of course, assumes that higher tuitions will have some impact on the student demand for the university's services.

The real danger of contraction, however, is that individuals who by nature desire excellence will begin to settle for mediocrity out of frustration.

THE FIRST VALUE IMPERATIVE: ACADEMIC EXCELLENCE

The first step that must be taken by the administration and faculty of a contracting university is to recognize that the organization can reach a viable equilibrium position at a smaller size than it had in the past. Most institutions run into trouble because one variable, student enrollment, slips, and no adjustment is made in the administration, faculty, staff, space, and the corresponding budgets.

The concept of an equilibrium at a smaller scale of operation is one that is difficult, psychologically, to accept. Under conditions of contraction, however, it is necessary to reexamine the scale of operation of the university. When inflation is present also, the problem of finding the proper scale of operation becomes even more difficult. The usual way of finding a new equilibrium for a university when students were plentiful was to increase the student-teacher ratio by adding more students. This move forced greater productivity on the faculty but risked adversely affecting the quality of education.[3] With contraction, initiated by fewer students, everything must be brought into the proper proportion--faculty, space, research, administration, and staff. At the new equilibrium, there will undoubtedly be rooms and even buildings that are closed and taken completely out of use. Administrators must become less specialized--the admissions director may also have to be the financial-aid director; the vice-president for business operations may also have to be the controller; the president may have to do without a provost; colleges may be merged; and so on. The new equilibrium at the smaller size will, in many respects, be a new university.

Once the concept of an equilibrium position at a smaller size is understood and the fear that the organization is on the road to disintegration is eliminated, it is necessary to develop positive programs oriented toward attaining an increased level of excellence for the organization. These programs may be designed to strengthen the subunits of an organization, such as the departments within a college, or to improve the quality of an important activity, such as the delivery of educational services.

A positive program will, of course, require funds that can be utilized for its implementation. These funds may be obtained from foundations; the utilization of reserves, if they exist; or from a reduction in expenditure in another part of the organization, for example, the administration. A positive program that is designed to change the attention focus of the faculty from survival to excellence will be most effective when it provides money for faculty to develop an idea. One effective approach is to make funds available for some objective or set of objectives, such as improving teaching, or seed money for new research through a faculty-dominated internal foundation. Faculty are stimulated to submit proposals, and another set of faculty determines which proposals are financed. The point is that a concerted effort involving the faculty directly will help make the organizational goal of continued excellence real to the participants. Further, the program focuses the attention of the administration as well as the other participants on goals that are professional in nature as opposed to the constraints, which are generally financial or physical (buildings, facilities, and so forth). In fact, the major leadership tasks under conditions of contracting or constant size are to maintain the attention focus of the faculty on the professional goals of the organization and at the same time to follow managerial policies designed to produce the efficient utilization of resources.

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[3] There is conflicting evidence about the effect of class size on educational quality. Cf. Robert Dubin and Thomas Taveggia, The Teaching and Learning Paradox: A Comparative Analysis of College Teaching (Eugene, Oreg.: Center for Advanced Study of Educational Administration, University of Oregon, 1968).

The university administration must be careful to maintain standards of excellence in the face of financial pressure. Promotion and salary decisions, for example, should not be made on the basis of a faculty member's capacity to raise money from outside contracts to support his salary and research. Further, the university administration must recognize a limit on the proportion of a faculty member's salary that can be financed from outside. The educational goals of the university cannot be compromised.

The same type of position must be taken with respect to research. It is critical that universities maintain a strong research program, particularly in the areas of their teaching programs. Without such research, the quality of the teaching program will not be maintained. A careful analysis must be made, however, of the cost of the research program. Research is not a free commodity nor one that is a net contributor to university revenue, even when faculty are not being fully utilized by teaching. Research must be maintained because of the university's obligation to develop new knowledge in the fields it covers. The proper balance must be struck between teaching and research in the search for the new fiscal equilibrium.

A research program has the virtue of being financed, potentially at least, by outside sources. The universit must be particularly careful to prevent financial pressur from leading it to undertake research projects that are no of the proper quality for a university. I do not make as sharp a distinction between pure and applied research as is sometimes done. My distinction is between good and bad research. Good research will generally combine elements of both pure and applied research, as generally defined. The point is that university funds must generally be utilized to support some of the research. In order to attain available funds for research, it may be necessary for faculty to teach more courses than has been true in the past. In a contracting organization, one important source of funds is increased productivity. We may discover in the eighties a truth that was evident to many in the fifties--research can be done even though three courses a semester are taught by the faculty member. Hopefully, new technology and new methods can help reduce the pain.

THE SECOND IMPERATIVE: DIVERSITY

There are three kinds of diversity that are critical. The diversity of programs and of students is important to consider within an institution. The diversity of institutions is an important consideration within the whole educational system.

We will look at the problem within institutions first. It is highly likely that the diversity of programs within an institution will be reduced as one of the trade-offs in reaching a new equilibrium. As the student body shrinks, class size and its relation to productivity will be closely examined. Some programs will undoubtedly have to be sacrificed by some institutions. Hopefully, no program will disappear entirely from the system as a whole. Clearly, the elimination of a program in X at several institutions provides more students for the institution that still offers X. To the extent that diversity is an element of academic excellence, the latter will suffer in the years ahead. With fewer faculty and fewer students, it is unlikely that the same rich mix of courses can be offered as at the larger size.

One way for some schools to minimize this impact is through cooperation. In many locations, schools of similar size are located near each other. Courses eliminated from one school may become economically feasible at the other, with cross-registration. Similarly, the sharing of equipment, libraries, and even laboratories may make it possible to reduce the damage that contraction does to diversity of programs. A more radical idea is to organize facilities within a region that become "moveable feasts." One math department, for example, might be organized within a region that contained a number of universities and colleges. The various institutions could then purchase the particular services desired from the department. Just as we can share computers, we can share faculty who, because of specialized abilities, may be both scarce and costly. The use of technology such as TV can also be used to maintain diversity. By utilizing cable TV or other special arrangements, it is possible for one institution to provide services for others.

The diversity of the student body is a more complicated factor. There is clearly a tendency in our society for educational services to be more accessible to low-income groups and to high-income groups. The low-income groups can be financed by federal and state funds. Depending on the exact income, the low-income student may have his total need financed. The high-income student can, of course, use the high income to pay his way. Those students from the middle incomes tend to be either excluded from attending college or forced to attend public universities. Thus private institutions tend to be polarized, and public institutions tend to have an abnormally high proportion of students in middle-income levels. The government-approved formula by which the Parents' Confidential Statement is evaluated tends to discriminate against the middle-income student. Again, the only answer to attaining a student body of economic diversity is for an institution to make its own funds available for financial aid so that it will not be subject to the discrimination of the government-approved formula.

The other type of diversity, diversity of institutions, is in danger in our society because of the competition between public and private institutions. The major cause of the difficulty is the growing gap in the amount of tuition charged. Private institutions, under the pressure of inflation, are forced to continually raise their tuition. Public institutions have the possibility of getting increased appropriations from state governments. Where public institutions cannot do this, however, the gap is still increasing, because the absolute value of the increase is greater for the private institution. Even with quality differences, the growing size of the gap will eventually result in an increasing number of students going to public institutions. As the enrollment in higher education as a whole decreases, more and more private institutions will be in financial difficulty. These schools will either have to close their doors or become public institutions. Thus the diversity in the total educational system that is derived from the private institutions will be reduced.

The answer to this problem is simple, although highly unlikely to be tried. That answer is for governments, federal and state, to stop all aid to institutions and give aid only to students. The students can then decide where they wish to go to school. The public institutions would have to raise their tuition and reduce the gap. Students from lower-income families would not be hurt, because the aid they received would cover as much of the tuition as the implicit state subsidy did before. Assume, for example, that the tuition for a public institution was $1,000 and the total cost for a student was $3,000. The implicit subsidy would be $2,000. Suppose that after the change, the tuition went to $3,000; then financial aid of $2,000 to the student would then leave him as well off as before. The political difficulties of making such a transition are obviously great, and I, personally, have little hope of a rational solution of this kind. We must, I believe, face a situation of reduced diversity in higher education. It will be extremely difficult over the next 25 years for any private institution with an endowment of less than $50 million to survive as a private institution.

THE THIRD IMPERATIVE: ACCESS

One of the tenets of our society is that all members of the society should have an equal opportunity to fulfill themselves as individuals. In terms of education, this proposition means that the economic position of the individual or his parents should not inhibit his desire for higher education. Obviously, this position does not mean that any person has a right to go to any school at zero cost. The implementation of the equal-opportunity tenet has been of concern to higher education, particularly private institutions. Public institutions with their subsidized tuition already represent one attempt on the part of society to provide access to higher education. Private institutions with higher tuitions and historical records of catering to predominantly white students from families with good incomes have presented a barrier to minorities and the disadvantaged. It is to the everlasting credit of these private institutions, large and small, famous and unknown, that they have used their own resources to transform the composition of their student bodies.

This transformation has been costly. Frequently, this group of students has required a large amount of aid in the form of grants, most of which had to come from the institution's own funds. Both public and private institutions have had to spend a considerable portion of their financial aid to help provide equal access. It is highly likely, though highly regrettable, that in a period of contraction, less institutional money will be spent on providing equal access. It is my estimate, although I will not let it happen at my institution, that many universities and colleges will not maintain a constant proportion of minorities and disadvantaged students during a contraction in the student body. It is my assessment as an organization theorist that higher education will treat its moral obligations the way industry treats basic research during a contraction. Increased federal-government support in the form of direct aid to students to provide equal access may alleviate the situation somewhat. The approach that should be taken is to reduce costs by the same percentage as revenues are reduced so that the proportion of minority and disadvantaged students will remain constant.

SUMMARY AND CONCLUSIONS

There are other imperatives that might have been discussed--educational innovation, educational research, societal problem solving--and, I am sure, many others. No doubt, everyone has a favorite imperative. Nevertheless, the imperatives I have discussed must be on everyone's priority list. I have discussed these imperatives in a framework based on an important assumption. That assumption is that the allocation of resources in higher education is not Pareto optimal. A Pareto optimal solution is one where a reallocation of resources cannot be made with everyone being equal to or better off than before. In the case of a university, I believe it is possible to reallocate resources and improve the situation. Thus I do not believe that we necessarily must make trade-offs in order to achieve the objectives we view as imperatives. This assumption means essentially that we frequently have more resources in particular areas than we need. These areas might be any place--faculty, administration, physical plant, and such. The pressure of reduced enrollment and inflation may force a reallocation of resources that will make us more effective in achieving our imperatives.

The concept of a new equilibrium at a smaller scale of operation underlies the belief that we can make the adjustment to a lower enrollment. The notion is that this new equilibrium would enable higher education to achieve the goals it did previously but in proportion to the smaller scale. The concept is based on the assumption that in the period necessary for adjustment, fixed costs can also be made variable. This switch requires a great deal of work. First, the fixed costs must be identified, and then ways must be found to make them variable. We need, for example, presidents and deans who also teach and do research.

The second factor that can be important in reaching a new equilibrium is improved management. Higher-educational institutions are not at Pareto optimal points, because resources are not being used in the most effective manner. One of the functions of management is to make allocation of resources that will achieve results consistent with the institution's goals.

In summary, it is these two approaches--scaling down the total operation to a new, viable equilibrium position and improved management--that, I believe, will enable us to achieve the imperatives. Both of these approaches require stronger central control than university faculties are accustomed to accepting. Therefore one of the important tasks of the next two years is to prepare faculty by giving them an understanding of the future. In that way perhaps, we can take the actions necessary to make higher education viable without making it totally public.

It is ironic that "management," which has been a dirty word on most campuses, is our major hope for the future. We must have people who understand academic values and who themselves are scholars and educators leading our departments, our colleges, and our universities. But it is critical that these same people understand how to manage particularly contracting organizations. There is no alternative, if we are to be "the masters of our fate and the captains of our souls."

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Outcomes Planning: Solution or Dream?

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In contemporary discussions of higher education, three of the most frequently encountered concepts are efficiency, accountability, and management. As in the case of the weather, everyone talks about efficiency, accountability, and management, but nobody does anything about them. The reason is that all three of these concepts are utterly meaningless in the absence of valid assessments of outcomes, and no one quite knows how to estimate outcomes except through vague, intuitive procedures.

Efficiency, by definition, is expressed as a ratio between outcomes and resources employed--that is, between benefits

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and costs, or less elegantly, between outputs and inputs. Similarly, accountability implies an obligation to produce outcomes that are commensurate with the costs. Likewise, management implies that different technologies (or methods or procedures) will produce different results or outcomes and that it is the task of management to select those technologies that will produce the best outcomes in relation to the amount of resources employed. In each case, the assessment of outcomes needs not be precise and needs not be expressed in cardinal numbers; but to make any one of the three concepts meaningful, outcomes must be expressed in terms of more or less. All decisions about staff, curricula, teaching methods, facilities, institutional organization, governance, and even finance can be determined rationally and deliberately if there is some knowledge of effects on outcomes.

One of the facts of life, however, is that the values we cherish most are not readily susceptible to precise measurement. Such values as friendship, love, beauty, honor, patriotism, and fairness are assessed by means of an art that is based upon intuitive judgment. When such intuitive judgment is formalized and institutionalized, it is called criticism. Our powers of criticism are developed in proportion to our sensitivity, and our critical judgments are based upon standards derived from tradition. The influential critic has keen sensitivity coupled with knowledge of traditional standards and is thus able to reach judgments that gain wide acceptance. We are familiar, of course, with the art critic, the social critic, and the educational critic. Even in economics, where money serves as a measure of value, the critic has an important role. For example, an economy that maximizes monetary values may be criticized because it does not produce a fair distribution of income, or it does not give sufficient attention to the environment, or it ignores job satisfaction, or it produces personal alienation, or it encourages vulgar taste. In the world as it is--even in the economy--there is no way to solve questions of value by easy, quantitative formulas. There is no way to sidestep intuitive judgment and criticism with all the pitfalls they entail. This is especially so in education, where the purpose is to facilitate the sound development of unique human beings and where the ultimate end is the good life. It would be foolish to suppose that educational outcomes could be readily quantified and the processes of judgment and criticism could be wholly dispensed with. In planning and decisionmaking for education, we are forced to practice the art of criticism based on intuitive judgments. As Cardinal Newman observed: "A university is . . . an Alma Mater, knowing her children one by one, not a foundry, or a mint, or a treadmill." Similarly, John Dewey wrote: "What the best and wisest parent wants for a child, that must the community want for all its children. Any other ideal for our schools is narrow and unlovely; acted upon it destroys our democracy." And an economist friend of mine, Sar Levitan, summed it all up when he said: "Statistics are no substitute for judgment."

Yet the concept of efficiency has a place in all human endeavors, even in such inscrutable areas as foreign policy, military strategy, religion, art, marriage, and poker. Education is surely no exception. There are better ways and poorer ways of going about teaching-learning, and there are also more expensive and less expensive ways of going about it. The most efficient ways are those which yield the highest ratio of results to cost. Just as families or churches or nations can be more or less efficient in achieving their benevolent purposes, colleges and universities can also be more or less efficient. And colleges and universities could be more efficient if they paid greater attention to discovering their outcomes.

At present, institutions know very little about their results and next to nothing about the effects of changes in their procedures and methods on the results. There have been sporadic, one-time studies of outcomes in particular institutions and also a number of one-time studies of small samples of institutions. But there have been few systematic, ongoing efforts to assess outcomes and certainly few cases where the study of outcomes has been linked with management. Such studies are urgently needed, if institutions are to have better information for management and accountability, and if the profession is to learn more about the consequences of alternative procedures and methods. Without such knowledge, institutions are destined merely to follow tradition, or to do what is expedient in the light of prevailing pressures of the market and of politics, or to be vulnerable to every fad that sweeps through the educational community, or to manage by intuition, or to do some of all four. One may respect tradition because it is the result of a kind of natural selection achieved through many trials and errors; one may understand the need for adjusting to political pressures; one may believe that institutions should be open to the new; and one may respect intuition, especially when it is practiced by experienced and sensitive persons. Yet, decisionmaking need not be based solely on tradition, political pressure, fad, and intuition; these can be supplemented by knowledge. If the nature of our task is such that we often must fly blind, it would be good to have radar to give at least a general sense of direction.

I would like to commend NCHEMS for its leadership in calling attention to the need to explore outcomes and for its efforts to invent procedures for doing so. All educators are indebted to the NCHEMS group for their pioneering efforts. But as I am sure Ben Lawrence would be the first to acknowledge, NCHEMS has barely scratched the surface.

With these introductory remarks, I would like to suggest some basic principles that should be followed in the identification and evaluation of the outcomes of particular colleges or universities. I shall confine my comments to the outcomes of undergraduate education, but, of course, a complete assessment of higher-educational outcomes would embrace the important outputs in the form of advanced professional and graduate study, research and scholarship, and public service.

My first principle is that the study of outcomes should avoid the common confusion of inputs and outputs. Most evaluation of institutions is conducted in terms of such variables as faculty-student ratios, number of Ph.D.'s in the faculty, size of endowment, current expenditures per student, college-board scores, number of library books, range of facilities and equipment, value of physical plant, extracurricular programs, and such. These are all inputs, and it is by no means established that there is any systematic, positive correlation between these inputs and the true outcomes defined in terms of the personal development of students. Indeed, in view of the wide differences in expenditures per student among seemingly comparable institutions, the burden of proof is upon the high-cost institutions to demonstrate that their generous expenditures actually yield commensurate outcomes. It is not even appropriate to define outcomes in terms of the experience of students in connection with their college education. Such measures as attendance in the libraries and laboratories, number and type of courses taken, and attendance at public events are technologies, not results. Even such variables as absenteeism or dropout rates are not conclusive indicators of outcomes. Indeed, it is possible that students are doing the right thing, in terms of their personal development, by staying away from formal programs, or by changing institutions, or by dropping out of college altogether. The only valid tests of outcomes are: What happens in the development of persons? How do persons change and grow as a result of their college experiences?

My second principle is that the assessment should be linked to all the major goals of education and not confined to particular aspects of human development, for example, those that can be easily measured or that are related to economic success. In general, five kinds of goals will be of interest to most institutions:

1. Cognitive development of students, including verbal and quantitative skills, substantive knowledge, rationality, critical thinking, intellectual tolerance, and lifelong learning

2. Aesthetic sensibility

3. Emotional and moral development, including personal self-discovery, human understanding, religious interest, and psychological well-being

4. Practical competence relating to citizenship, economic productivity, family life, consumption, leisure, and health

5. Direct satisfactions and enjoyment from college education during the college years and in later life

The goals of an institution are its intended outcomes, and hence institutions are prone to think of their outcomes in terms of their intentions and hopes. But they should be on the lookout also for unintended outcomes. Some of these may by serendipity be positive, but some may be negative. For example, college may generate discouragement, boredom, suppression of creativeness, acquisition of bad habits, needless failure, and even suicide. And these negative outcomes should be taken into account.

A third principle is that educational outcomes should relate to the development of whole persons. Most evaluation of students employs instruments that measure only particular aspects of students' personalities. Such instruments measure, for example, verbal skills, religious interest, aesthetic sensibility, general knowledge, or life goals. Each of these kinds of instruments tells us something about groups of students with respect to a particular dimension of their personalities but tells us very little about what happens to individual students considered as whole persons. Indeed, the average changes in these various personality dimensions are usually small and lead the unwary to the conclusion that college really does not matter very much. Actually, college may exert a major impact on its students, considered as whole human beings, even when there is little or no change in average scores on tests of particular characteristics. The explanation of this seeming paradox is that there can be enormous dispersion among individuals with respect to particular characteristics while the averages change little or not at all. Every tabulation of scores on specialized test instruments shows wide differences in what happens to individuals as they are affected by college. On any given dimension, some students will gain ground, some will lose ground, and some will not change at all. Aggregates and averages reflect the central tendency of all these wide variations and conceal the substantial differences experienced by different individuals. For example, Feldman and Newcomb (1969, p. 9) cite a study in which a group of freshmen achieved an average score on religious value of 41.75, and the identical students as seniors scored 41.57. But the individual students making up the group showed changes as follows: -19, -16, -14, -12, -2, +1, +3, +7, +11, +12, and +16. A comparison of the two averages would lead to the conclusion that no change had occurred; yet the individual scores revealed enormous variability.

The purpose of higher education is not necessarily to produce positive changes for all its students along every dimension of personality development. This would clearly be impossible and undesirable. Colleges accept individual differences among their students and encourage their students to develop individually along lines consistent with their unique interests and talents. For any individual, such development inevitably means substantial progress along some lines, no change along others, and regression along still others. Regression along some lines is not necessarily a sign of failure. For example, a student who in high school had devoted much time to music may discover interests in science. As a result, he or she may regress during college in aestheticism and progress in intellectuality. Or, to take another example, a student may come to college with highly developed mathematical skills. He or she may discover new interests in social issues that result in a regression in in mathematical skills but a progression in political awareness. These regressions are not necessarily negative outcomes; they may represent constructive changes in personality configuration as a result of exposure to new opportunities.

It is unlikely that any student will progress simultaneously along all possible lines of development. One reason is that people differ in the distribution of their talents. Some individuals have highly specialized talents and interests, others more diversified ones. But few, if any, are so well-rounded that they can be expected to make equal progress across all possible lines of personality development. Another reason is that the cultivation of any one interest takes time and energy. To pursue every interest equally would be at the sacrifice of significant achievement in any one area. The totally well-rounded individual who pursued every conceivable interest would surely be a bland, innocuous, and mediocre person. Excellence of personality involves choices based on a weighing of values in relation to interests and talents, not the equal pursuit of every value that can be conceived of. There may be some values which should have high priority for all, for example, personal honor or consideration for others. But among the wide range of values that life presents, there are trade-offs involving choices based on the unique characteristics of each individual. This being so, each individual does and should make use of the opportunities available in the college environment for the development of his unique personality. In the process, every individual may change, but the averages for each personality characteristics may change relatively little.

To study the true outcomes of higher education in all their variability, then, calls for the study of individual students in some depth. One must ask not what was the average gain in verbal skills of a college's entire student body, but rather what happened in the total personalities and in the life experiences of individual students as a result of their college careers when those students are seen as whole human beings. The few studies that focus on whole persons yield results that come closer to the changes that educators observe in their students during and after college than typical studies based on average changes in particular dimensions of personality.

A fourth principle is that outcomes assessment should be based upon the study of alumni as well as of students in course. The study of alumni raises questions that have barely been touched in educational research. For example, we have almost no knowledge of carryover of substantive learning to adult life. The residue of a college education--after the initial forgetting of detail--is a virtual mystery. But we should be interested also in the values and attitudes of alumni, their interests, their citizenship, their family life, and their careers, as these may have been affected by their college experiences.

A fifth principle is that the outcomes assessment should be concerned with change in students as a result of their college experiences, not merely with their absolute level of performance during and after college. By far, the most important factor determining the performance of students during and after college is their background and ability at the time of admission to college. If an institution admits mainly bright young people from affluent families, the performance of its students in their studies and in their later careers will almost certainly be superior to those of students of an institution which admits students of limited backgrounds and abilities. For the more selective colleges and universities to take credit for the achievements of their alumni, as they often do, borders at best on the naive and at worst on the fraudulent. There is evidence to indicate that many nonselective institutions bring about greater changes in their students than some selective ones, and it is change, not absolute performance, that is the criterion of true educational outcomes. The change may be measured relative to change achieved by those who do not attend college, or relative to change achieved by students of other institutions, or relative to change achieved by the subject institution in past years.

A sixth principle is that the evaluation scheme must be practicable. This means that it should not be impossibly expensive. It should concentrate on major goals and avoid trivial detail and should be based on small samples of students and alumni, rather than trying to cover the entire universe. I would go so far as to suggest that the experiences associated with evaluation should have educational benefits to students of sufficient value to justify the cost on direct educational grounds. I would hope that the faculty and student time involved in outcomes assessment could be incorporated in the regular educational program and not require additional expenditures. The test of practicability means also that the results must be understandable to the public and and their representatives and must carry conviction. Otherwise, outcomes assessment will be worse than useless in achieving accountability. Practicability implies also that the study of outcomes should be linked with serious educational decisionmaking and not be merely a public-relations gimmick. In short, practicability calls for simplicity, low cost, and integrity.

Finally, my seventh principle is that outcomes assessment should develop from the bottom up within individual colleges and universities rather than be imposed from the top down by federal or state government or by national accrediting bodies. There is need for a great deal of experimentation in concepts and methods. Assessment should be related to the special missions or philosophies of particular institutions. It should not be restricted to procedures and instruments that can be used nationally. Institutions should not be put in the position of having to adjust their goals and programs to the requirements of a standardized evaluation scheme or to measure their performance using uniform standards set by others. Clearly, there is a place for procedures and instruments that have wide applicability, but there is great danger that outcomes evaluation will be dominated by conventional academic testing. And this, in my opinion, would be a grave mistake. The true outcomes of education cannot be expressed, except in small part, through techniques that produce neat and tidy numerical scores. They call for serious exploration of what happens in the lives of people as a result of their college experiences. Sound outcomes assessment will focus on students as persons and will provide a vehicle by which institutions can become acquainted with their students as living persons rather than as numbers in a computer or grades on a transcript.

I do not pretend that outcomes assessment as I conceive it would be easy. I am not even sure it is feasible. Yet I think it is urgent that educators try to learn more about their institutions' outcomes. And I believe that through such efforts, carried on independently in many institutions, we might gradually, through trial and error, develop sound methods which would supplement our intuitive judgments and serve as a corrective for the wishful thinking and the empty rhetoric in which we all indulge. Over time, the assessment process might contribute to efficiency and might demonstrate the value of higher education in ways that would strengthen public confidence in it.

Let me conclude by considering some practical issues.

First, there is the technical problem of controlling for extraneous variables. How does one know whether what happens to students in college is due to native ability, family background, the mass media, or to the normal maturation process? I think this problem can be sidestepped in two ways. One way is to record change over time in the results obtained by the particular institution under study. For example, if over time one observes that gains between the freshmen and senior years are increasing or decreasing, that becomes evidence that the institution is progressing or retrogressing. Thus an evaluation program carried on year after year establishes its own norms and provides a way of measuring, or at least judging, institutional progress. Another way, which I find appealing, is to join with other comparable institutions in the evaluative process, so that each institution could compare its results with others. Ideally, a group of cooperating institutions would be composed of those which are not mutually competitive so that there would be no diffidence about sharing information.

A second problem pertains to publicity of results from outcomes studies. Should they be held in confidence or made public? My preference would be to make the evaluative process public. My reasons are that the whole college or university community ought to be psychologically involved in evaluation. The evaluation ought to be conceived as a concerted effort by everyone in the institution--students, faculty, administration, and other staff--to bring about educational improvement. In case of poor performance or retrogression or sluggish improvement, the whole community should know and be concerned, and all should lend their efforts to correct the problem. Good public relations would flow from an honest and competent effort to evaluate results, whereas a policy of publicizing good news and suppressing bad news would be the worst kind of public relations. Just as most institutions publish their financial and enrollment data, they might publish their educational results as well. The results might at times be humbling and sobering, but those institutions which could manage and plan on the basis of clear objectives and measured performance would outdistance those which fly blind.

Finally, I come to the question of cost. I do not pretend that the program I have outlined would be easy or cheap. Substantial parts of the program could be started soon and without exorbitant cost, but the entire concept would require a great deal of invention, learning, operational time, and money. I would favor starting on a small scale. I would also favor using sampling techniques, in the beginning with very small samples. The educational impact of the program could be very great and would justify the investment of substantial resources. As a rule of thumb, I should think an institution should eventually devote no less than 1 to 3 percent of its educational budget on evaluation and related research and development.

What would be the source of this amount of resources? In the startup phase, an institution could secure considerable help from foundations or special gifts, but not in the long pull. I believe the program should be incorporated into the teaching load of the faculty, by giving students credit for participation in the program and thus reducing the ordinary teaching load. For example, students might earn the equivalent of credit for at least one course if they took the tests, kept the records, attended the interviews, and filled out the questionnaires which would be part of the program. The experience of participation in an effort to achieve solid evaluation would, in my judgment, have educational significance justifying credit. By offering credit, faculty time could be diverted from ordinary teaching to the evaluation program.

In conclusion, institutions that will give leadership in the matter of evaluation will find the costs returned to them many times over, partly because evaluation is the way to demonstrable quality and partly because it is the way to true accountability. Money, for particular institutions and also for higher education as a whole, will follow demonstrated quality and accountability.

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Values and Analytical Models In Higher Education

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Why does there appear to be a reawakening of interest in the United States in the values and ethics of public as well as private enterprise? Is this the moral residual of the wrenching experience of Watergate? I was surprised when it was pointed out that the last high-school students who were in high school during the Watergate hearings graduated last June, and virtually no youth currently in secondary schools remembers from first-hand experience those incredible days of the summer of 1972. Or perhaps it is the recognition that American higher education is at a watershed in so many dimensions: our world of growth will soon be a world of steady state if not contraction; the treasuries which were once opened so generously are now cautiously guarded, especially in the presence of university presidents; the assumption that colleges and universities would be the spearhead for social change and that a new order, the Great Society, the Fair Deal, the New Federalism, would be ushered in by our best and brightest has proved painfully untrue.

In addition to asking ourselves why the future appears to be unfriendly and actively seeking Pollyannas to reassure us that a tide of eager adults will wash over our shores and that golden days will return once more, we find ourselves also asking what kind of role higher education should be playing in what is an obviously changing and disorienting world. These are all questions that are far easier to ask than to answer, and therefore it is understandable that we would seek help from all quarters, especially from the application of modern management, which has held itself out as the savior of the future so many times in the past.

CONTEXT

I find it helpful to distinguish three levels or contexts for discussion of values. At the level of abstract philosophy, values are like some disembodied platonic form: there because we think them and subject to all the rules of rationality shared by all theorems and corollaries. The manipulation of mathematical symbols is the natural language of philosophy, and in this very abstract context, analytical models are the natural means of expressing value systems. Even at this level of abstraction, there is a wide variety of alternative conceptualizations of value systems and the corresponding analytical structures which best describe them (Churchman 1961).

At a slightly more specific level, there are the social values or norms to which actions should conform and which are specific to a given culture. We value honesty, integrity, imagination, entrepreneurial diligence, and a host of traditional American "values." Any society's values are in a state of flux, but the American values have been in a particularly rapid state of flux in the past 30 years. Lodge (1975) has argued that the new American ideology is emerging away from the individualistic, entrepreneurial, and competitive system forged in the crucible of the economic and political revolution of 1776 to a much more collective, collaborative, mutual dependency with government and governmental institutions playing a dominant role in the societies of today and the future. With government representing one-third of the gross national product, and the service industry over half of the total labor force, the new American ideology may be arriving all too quickly.

At the level of an individual or an organization, there are the operational preferences that describe the relative values that an individual or an organization would ascribe to different sets of outcomes. These preferences describe the relative value of one more unit of instruction versus one more unit of research, or of additional resources devoted to fine arts versus physics, or the relative emphasis that should be given to women's athletics or modifying facilities for the handicapped. Conceptually, preferences exist in the absence of specific decisions but are really operational in those choice situations which one encounters frequently. Classical microeconomics is built on the assumption that individuals and organizations have relatively stable preferences about which they are fully aware and with respect to which they are fully consistent.

I think it is more appropriate to discuss values in the context of a specific decision rather than in a very general context.

VALUES ARE ONE COMPONENT OF A DECISION

While all decisions differ in terms of the content, the actor, the situation, and the specific details of what is being decided, I would argue that the structure of decisions is constant. I find it helpful to think of the elements of decisions in terms of how to classify the variables that are operational in a particular situation, how to describe the structures which link these variables or the particular decisionmaker in question, and those other considerations that are important. With respect to a particular decision and decisionmaker, it is usually straightforward to classify the variables that apply to the situation into those that are controllable by the particular decisionmaker, those that are fully exogenous of the situation and can neither be controlled nor influenced by the decisionmaker, and those, which are jointly determined or endogeneous, resulting from both the actions of the decisionmaker and the outside influence. For example, the number of students who enroll in an institution this fall is a function of the number of students who graduated from high school this last spring (a number that is truly exogenous to most institutions of higher education), the number of students who have been offered admission and their financial-aid awards (a variable that is controllable in most institutions), and the decisions of individuals and their parents about where they will attend. Thus enrollment is not a controllable variable but is an endogeneous variable.

There are essentially four linking structures among these variables: the value function expressing preferences over outcome and the loss of values with the use of inputs; the inquiring system that generates information from data in ways that are personally meaningful for the decisionmaker; the cause/effect assumptions that relate action and consequence, means and ends; and the constraints set under which a decisionmaker operates. Two other important considerations are uncertainty and the planning horizon or time period into the future which a decisionmaker considers.

These nine elements are the basic components of the decisions and provide a reference for discussing the contribution of analytical modeling both to decisionmaking and higher education and to our understanding of the value function.

ANALYTICAL MODELING ADDRESSES DIFFERENT COMPONENTS OF DECISIONS

Of the nine elements of a decision, the cause/effect relationship or assumption is the most frequently modeled. Examples of computer-based planning models built around cause/effect assumptions are most of the resource-simulating models, student-flow models, faculty-flow models, facility-planning models, the induced course load matrix, manpower-planning models and a variety of other methods. These models essentially answer "what if" questions by calculating the expected consequences of changes in some policy variables. The assumption is that the policy variables are in fact controllable, although often, under careful scrutiny, one finds that they are not controlled variables but they are endogeneous variables, such as enrollment or the total number of faculty, assumed by these models. In many cases, the cause-and-effect assumptions have not been empirically tested.

The value function has been only infrequently studied. Several optimizing analytical models have been constructed (see Weathersby and Wagner 1971, for discussion of these), and these typically used either user or supplied values for their relative weights of preferences or user-identified targets to which a model tries to come arbitrarily close. Some user-interactive models have been developed in which the user continuously assesses his or her preference function (Geoffrion and Dyer 1971) but these have been relatively limited in application. Goal programming and other techniques have been used in manpower planning and other areas as optimizing models.

One of the great potentials for optimizing models is that by focusing on the desirability of outcomes, the models then generate a sequence of alternative actions, each one more preferable than the previous. This synthesis of new alternatives, which is not accomplished through the cause-and-effect simulation models, is one of the great potential strengths of optimizing models. The trade-off is that if you are willing to be explicit about your preferences, analytical models can invent combinations of actions that may be counter-intuitive but, upon analysis in reflection, preferable to the status quo. It is unlikely that simulation models would ever lead a person to discover counter-cyclical policies or actions.

The constraints set is sometimes included in the formulation of a model but is rarely analyzed. To simplify complex decision problems, we often impose numerous constraints without going back to determine whether or not the cost of those constraints is reasonable. Similarly, the inquiring systems and the uncertainty structures are rarely modeled or investigated seriously in a decision situation.

ARE ANALYTICAL MODELS USEFUL FOR CLARIFYING VALUES?

No. Analytical models are limited to what is quantifiable, which may not be measurable by standard techniques but at least can be reduced to some numerical scale. There are many things of value which we do not choose to quantify, and therefore we probably leave out of analytical models more important components than we put in. The mathematical complexities of analytical models tend to obstruct learning about values that one might potentially gain from their use. The value-assessment process is typically outside of and preceding the formulation of a model. In fact, models often reflect the values of their builders rather than enable one to clarify values that one might bring to them. In addition, there is something very intimidating about the false pretention of accuracy that computer programs which carry things to 16 decimal places are able to provide. It is difficult to feel clear about one's intuition when surrounded by what is apparently numerate.

DOES THE USE OF ANALYTICAL MODELS AFFECT THE ETHICS OF HIGHER-EDUCATION ADMINISTRATION?

Yes, at least it raises questions. The construction of analytical models implies a professionalism or at least the presence of special expertise on a staff. This special expertise is often translated into a mystery-mastery relationship between those who speak the special language and those who are expected to use the results of analytical models. In this relationship, the FORTRAN speakers, PL 1 readers and RPG manipulators are likely to place the quantifiable outcomes ahead of the ethical outcomes of the decision. We should not forget that the purpose of analytical models is to inform academic decisions, not to control them by limiting or determining the type of information that is given to academic decisionmakers. We have an obligation to apply the same logic to analytical models as they apply to decision problems: what are the objectives one is trying to accomplish with a model; how well are those objectives now being met; what feasible alternatives exist in terms of format and content; and what would be their effectiveness. If we keep the decisionmaker's objectives in mind, analytical models can be genuinely useful.

ARE ANALYTICAL MODELS COMPATIBLE WITH ETHICAL CONCERNS?

Several years ago, Lawrence Kohlberg suggested that the structural development of moral reasoning can be described by a series of characterizations or world views that are relatively common across individuals and, in fact, across cultures. In a very shorthand form, he suggested that conformist individuals have a strong value system defined over their actions: you don't feel, work on the Sabbath, talk to people of another social class, or whatever.

In the next stage of development, the conscientious stage, people define their experiences, their values, over the objectives or consequences they believe to be important. If a high enough principle is involved, it is alright to steal, or enter into civil disobedience, or pose the law, or even lead a revolution. The final stage, the autonomous stage, is where one recognizes that the values are self-determined, that one is responsible for developing a system which helps one learn about values even as one is experiencing them.

With this framework, I find it interesting to observe that most of the cause/effect models for budgeting, resource issues, cost analysis, and so forth are dealing with a conformist value system, while the optimizing models assume an essentially conscientious value system. Ironically, the liberal-arts ideals toward which many of our colleges strive are at the autonomous level, for which few, if any, of our models are relevant. In other words, analytical models are most relevant to the stages of moral reasoning, which may be most prevalent but towards which institutions least aspire.

To Muddle or to Model, That Is the Question

The most thoughtful critics of analytical modeling suggest that "muddling through" is by far the preferable alternative (Wildavsky 1975 and Lindblom 1968). They argue that in a world characterized by many constraints, considerable uncertainty, little control over a few variables, and short time horizons, the optimal decision is rarely far different from the current decision, and politically sensitive administrators willing to muddle through will likely do very well. One hardly needs an analytical model to add X percent to last year's budget. However, muddling through works only so long as one doesn't consider the alternatives. Once one considers the alternatives, that is, one identifies the objectives of the decisionmaking process, and evaluates how well they are being met; examines feasible alternatives for their effectiveness and their cost; and chooses among those alternatives--that is the process of modeling itself.

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Postsecondary-Education Indicators: Can We Measure Our Value Imperatives— Access, Diversity, and Excellence?

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After Ben Lawrence invited me to discuss postsecondary-education indicators at this session of the NCHEMS National Assembly, he posed five questions to be addressed. To characterize my activist approach to indicator development, I will open this discussion by answering those questions.

Q: Should we develop postsecondary indicators?

A: Yes, of course, in four separate domains. We should attempt to define, develop, and apply:

1. Educational indicators--to measure both the diversity and excellence of educational programs
2. Financial indicators--to assess trends in the financial condition of postsecondary institutions
3. Social indicators--to measure progress toward the goals of equal educational opportunity
4. Economic indicators--to describe the impact of general economic conditions on postsecondary education

Q: Should we use existing data or wait for sharper concepts and improved data?

A: We cannot wait. While striving to develop more comprehensive conceptual frameworks for defining and interpreting indicators in postsecondary education, and while recognizing both the analytical and the political risks of misusing, or simply using, possibly misleading data, we should go ahead trying to construct indicators from existing data, with the conviction that the active use of data is essential to improving the collection, processing, and interpretation of such data. And better data are of fundamental importance in developing defensible advocacy positions in support of postsecondary education.

Q: In developing indicators, where should we start--at the national, state, or institutional level?

A: Higher-education analysts worry a great deal about possible misapplication of indicators based on national data, fearing that such aggregates are meaningless, or worse, misleading descriptors of what is actually happening at the institutional level. I believe, however, that the question is not at what level of aggregation should we begin, but more precisely, with what unit of analysis. To illustrate this distinction, current-fund surpluses or deficits for postsecondary institutions can be calculated either by totaling all revenues and subtracting all expenditures across the sector or by comparing revenues and expenditures for each institution in the sector. The latter method, focusing on the institution, will yield more sensitive, reliable, and credible indicators.

Even starting with the analysis of a single institution, however, one does not get very far before confronting the institution's own demands for comparative data with which to assess its performance relative to that of peer institutions. Such demands may immediately involve aggregating information from a number of institutions. But ultimately, aggregate data will be much more meaningful if they are built up from an understanding of what is happening at the institutional level.

In addition, some measures used in postsecondary education assess the performance of the system and thus make sense only in aggregate terms; such concepts as diversity and access are meaningful only when applied to the postsecondary-education system as a whole.

Q: How broad should the work in indicator development be? Should it be narrowly restricted, for instance, to financial indicators?

A: As I asserted at the outset, indicator development should be broad-based. If interpretation is to be completed, financial indicators must be viewed in the context of trends in other areas, including the quality of the educational program, the economic status of the faculty, and the financial burden on the students. Certainly, our efforts to develop indicators will be strengthened to the extent that these efforts are based on a solid understanding of the relationships between finances and program quality at the institutional level. Budgets may be balanced but at serious detriment to program quality.

Q: Should we be trying to develop theory relating indicators to each other?

A: Absolutely. I recognize that our understanding of the causal connections between teaching and learning, or between program expenditures and educational quality, is extremely limited, but as analysts, we focus too much on what we do not know and too little on what we do. I would argue that we know enough now to start framing rudimentary explanations of causal connections and specifying the conditions under which they hold that should be helpful in interpreting the indicators as reflections of real phenomena and as related to each other.

Having set forth my general approach to indicator development, I now want to discuss, in somewhat greater depth, measurement of three values upon which this 1977 National Assembly is focusing: access, diversity, and excellence. We have derived these values from our fundamental beliefs about what is moral and ethical and from our social and educational aspirations. We are now being asked to struggle with the objective question: can we measure these values?

The fundamental difficulties in assessing progress in our pursuit of these values are not measurement and data but concepts and definitions. If we can define access, diversity, and excellence, then I argue we can measure them, either directly or with adequate proxies.

Because the definitional and measurement problems are altogether different for each of these three domains, I will discuss each separately, starting with a core concept and extending it outward to operationalize it.

ACCESS

As currently used in higher-education policy analysis, the term access means the opportunity to participate in an educational experience. Note that a legal definition of access is "the right to enter and make use of." But access to education is still not a right in the legal sense; entitlements to education are inchoate or incomplete in this country; they are not fully guaranteed, even by the legislation expressing a national objective of providing students from low-income families increased access to postsecondary education.

The concept of access to educational opportunity as used in policy statements of national educational goals is often surrounded by a qualifying or limiting clause: after explaining that the objective is not to send everyone to college, "equal access" is defined in the restricted context of access to educational opportunities "from which the individual has a capacity to benefit." This delimitation of access implies acceptance of existing inequalities in education preparation, lower levels of compensatory effort, and smaller budget commitments to promote access. Such a supposition of what access requires is static. A more dynamic and activist approach to access would encompass potential capacity to benefit from an educational experience. Using individuals' capacities in establishing access goals demands a much higher order of commitment to equal opportunity.

Defining and measuring access to postsecondary education involves dealing at the outset with the question: access by whom? As a federal goal, increased access has been read to mean not more education for everyone, but rather more education for those now getting less education relative to some other group. Thus we must first ask: what groups of people are we comparing? Legislation establishing eligibility for student financial aid categorizes people according to need, calculated by subtracting from educational costs the expected family contribution as derived, with adjustments, from family income. Affirmative action is targeted on groups defined by sex and race. Though race is highly correlated with income at the family level, and sex is highly correlated with income at the individual level, the correlation is imperfect. In some cases, the lack of correspondence between race or income and educational disadvantage leads to some very difficult questions: Was Bakke, the son of a working-class white family, possibly displaced by the son of a well-to-do black family which sent him to an Ivy League college for his undergraduate work?

In designing programs to promote access to education, as distinguished from programs to redistribute income or social benefits, we must categorize people by educational advantage and disadvantage rather than by income, race, or sex as such. Grouping people in this way involves measuring cumulative educational achievement. The validity of such measurement has become increasingly controversial (though it is probably less difficult to expunge cultural bias from the testing of achievement than from the testing of ability). Paradoxically, when biased tests are used as a basis for funding regular or compensatory education programs, their very bias--by understating the education of particular groups--will result in a relatively larger share of the resources being allocated to these groups. But the use of test results as a basis for education funding is anathema to many people, and the technical issues surrounding the question are swamped by the political issues.

Currently, however, we have no aggregate statistics on the comparative access to educational opportunities of the educationally disadvantaged. We do not even have a clear idea of what the dimensions of educational disadvantage are. But we would have to start out by acknowledging that we should have. Meanwhile, analyses of access are most often based on income. We look at trends in college-going rates by income level.

COLLEGE-GOING RATES

Calculating college-going rates requires at the outset selecting a population base. Should we look at the total number of individuals in an age group, say 18-24? Or should we include only those in that age group who have graduated from high school? Actually, both data series are needed to analyze trends in access: one based on total population, to describe the overall condition; the other based on high-school graduates, to divide the responsibilities in the policy domain between the secondary and the postsecondary systems.

But use of the 18-24 age group, the "college-age cohort," leads to some distortion, since only about half of undergraduate students are of traditional college age. The concept of access clearly applies to adults as well, and a comparison of the access of adults with the access of younger people is a legitimate policy inquiry, as is a comparison of the access of different groups of adults.

Two problems arise in trying to measure the college-going rates of adults. First, the selection of a relevant population base is highly arbitrary: Should we consider everyone over 21? All those from 25 to 65? All those between 25 and 34? Second, comparisons by income level of younger people with older people founder on the social unit for ascertaining relative economic circumstances, since the comparison shifts from the dependent student's parental family to the older adult's own family.

In addition, analyzing trends over time in the college-going rates of groups defined by income requires defining the income brackets in terms of constant dollars, but techniques for doing this are being refined.

DATA PROBLEMS

While I maintain that our difficulties in measuring access relate primarily to concepts and definitions rather than to data, I must acknowledge some problems connected with data, two examples of which are offered here.

The first, which was brought up by an American Indian at an NCHEMS workshop on equality this summer, concerns data on the access of minorities to education. Perhaps because it is fashionable, or perhaps because they hope to get favorable consideration under affirmative-action requirements, many people with only traces of Indian blood self-report themselves as Indians; thus even the small college enrollments reported for Indians vastly overstate Native Americans' real college-going rates. Perhaps similar distortions operate for other racial or ethnic minorities.

The second data problem relates to the effects of calculating college-going rates from the standard census population base, which includes only the civilian population. The end of the draft brought about an apparent decline in education-participation rates, not just because of the drop in the number of young men enrolling in college to avoid military service, but also because those young men no longer in the military are added to the number of people in the civilian population base. Thus even if there were the same number of people in the country and the same number of people enrolled in postsecondary education, the education-participation rate would decline, as the result of the purely statistical artifact of shifting young men out of the military into the civilian population--not a negligible consideration in, for instance, some Vietnam War years, when close to one of every three men of age 20-21 was in the military. Depending on the income of these young men and on their propensity, by income level, to enroll in college, our failure to take into account the effects of changes in the population base on college-going rates may lead us to false conclusions about trends in access to postsecondary education.

ABILITY TO PAY

When we examine access to education by income level, we are using income level as a proxy for ability to pay, which it may approximate only roughly. To achieve a given income level, a black family, for instance, may have two or three workers in the labor force, and a white family only one. The costs of employment and employment taxes may be much higher for the two- or three-earner family than for the one-earner family, reducing the income available to the former for financing a college education. In 1978, a two-worker family might pay as much as $1,071 more in employment taxes than a family with only one worker. This could cut very deeply into discretionary income. In short, reported level of money income is not always a good proxy for ability to pay for postsecondary education.

Moreover, we should recognize that measuring ability to pay is not simply a matter of adding up dollars; ability to pay is itself a concept which embodies social values about the family's responsibility in paying for the college education of its children, as opposed to spending for consumption or saving or investment. The determination of current ability to pay also embodies expectations about the future; ability to pay in the current period is calculated after savings are put aside to cover future living expenses, when the earning years are over. Such calculation, in turn, involves judgments not only about the buying power after inflation of savings for retirement, but also about the amount of public benefits that will be distributed to the nonworking elderly. More basically, the ability-to-pay concept reflects public and private choice as to how income and benefits should be distributed to individuals over their years of schooling, work, and retirement--the United States permitting far greater inequality over the different periods of an individual's life cycle than most other countries.

THE NET-PRICE CONCEPT

Equality goals in our society are currently framed in terms of equality of opportunity--not equality of outcomes. And college-going rates indicate what young people actually do, rather than what they have the opportunity to do.

As an alternative to using college-going rates to define and analyze access, it has recently been proposed that a concept of net price be considered. Net price to the student is defined as college cost minus the sum of family contributions and grant aid. "By this measure, equality of opportunity exists when net price does not vary significantly by parental income for students attending schools of a given cost."[1] Moreover, equality of choice can be said to exist when net price is approximately the same, not only across different family-income levels, but also across different cost levels of postsecondary-education options. One particularly elegant feature of this definition of access is that for public policy purposes, the relative contributions of the federal and state governments in providing funds to achieve access--defined as approximately equal net-price levels--can be differentiated.[2]

Nonetheless, as proponents of the concept recognize, net price is a rather narrowly conceived measure of financial [barriers] to access. It is claimed that equal financial access exists in that net prices (particularly for students at income levels up to $20,000) are similar at postsecondary institutions of a given cost level.[3] Yet it must be acknowledged that wide disparities persist in the college-going rates of people at different income levels, a situation which underscores our lack of understanding of the nonfinancial factors affecting participation in postsecondary education.

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1. U.S., Department of Health, Education, and Welfare, Annual Evaluation Report on Programs Administered by the U.S. Office of Education Fiscal Year 1976, by John Haines, pp. 93-203.

2. John Lee, "Interstate Equity of Public Subsidies to Higher Education," paper presented to the Postsecondary Education Finance Conference, sponsored by the Education Finance Center of the Education Commission of the States, Denver, Colo., 18 November 1977.

3. Note that the equivalent net prices reported by OPBE across different income levels count a student's own savings as a reduction in the net price, thus using the student's own

If we too quickly adopt net price as a measure of access, we risk ignoring the need to identify and deal with nonfinancial barriers to equal educational opportunity.

EVOLUTION OF THE CONCEPT OF ACCESS

Our concept of access has evolved rapidly in a few short years. It has deepened from a concern simply with the individual's getting into school to a concern with the individual's completing school successfully. Thus measurement of attrition, persistence, and achievement has become relevant to the consideration of access. Our concept of access has broadened as well, to embrace the individual's choice among diverse educational options, especially higher-cost options.

Thus measurement of access to education now involves grouping individuals not only by policy-relevant characteristics, but also by the educational options they select. But these factors are not really too difficult to measure; they are the objective dimensions of access. Even the amount of information that people have about postsecondary education, still another aspect of access, is quantifiable. The subjective dimensions of access--for instance, the individual's educational preferences and perceptions of the availability of particular education options--are more difficult to measure.

But beyond these measurement concerns, we face much more rigorous requirements: these are to state our objectives with respect to access, and to specify the criteria by which we will judge fulfillment of the objectives. Will the goal of access be reached when differences in achievement are narrowed around some average level? That objective is

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source of payment (savings instead of current income) in defining the concept of net prices, which should be defined only in terms of who pays.

Charles Anderson at the American Council on Education has pointed out that pressing the net-price measure of equal access to its logical conclusion, equality of opportunity does not exist until higher education costs each student nothing inasmuch as there are some students, the rich ones, that pay nothing. Also, net price relates to those students who did enroll and does not necessarily measure the educational opportunity of those who did not enroll.

probably too egalitarian for our tastes. Will it be reached when we accept absolute differences in achievement but raise the absolute level, thereby reducing the relative differences? That objective is not likely to be acceptable to the disadvantaged minorities seeking distributive justice. Will it be reached when the performance of the bottom quartile is brought up to average level? That is impossible, because there will always be a bottom quartile. Or when those at the bottom of the distribution are brought up to some absolute level of achievement? That is feasible, but we must then specify the absolute level to be achieved. How are we to take into account rising expectations over time?

Philosophically, our objective is to increase the access of particular individuals to educational opportunities. But practically, the achievement of that objective is likely to be measured with reference to the education-participation rates of some group. Necessarily then, our judgments about whether the objective has been achieved will depend upon what characteristics we consider in assigning individuals to groups.

After we have (1) defined access, (2) stated our objectives with respect to access and established criteria for determining when those objectives have been achieved, and (3) measured trends in access indicators, we face still another tough question: Can we measure the effectiveness of programs intended to promote access? Cost-effectiveness evaluations of such programs should extend to such questions as whether need-based programs intended to increase access for low-income students have induced increases in educational costs for all, thereby in effect reducing access for unassisted students. An even more basic question in analyzing the cost-effectiveness of student-aid programs is whether they should in part be assessed not for their effectiveness as programs to promote access to education but as redistributive antipoverty programs.

DIVERSITY

Diversity is acclaimed as a distinctive feature of the American postsecondary education. We now understand that diversity among the suppliers of education is necessary to make meaningful the choices of individuals seeking education. Thus it is an essential adjunct to access.

In the past, diversity was defined and defended by contrasting the educational offerings of the public and the private sectors; more recently it has been recognized that there is greater diversity within the sectors than between them. But what is diversity? How different must *different* be to constitute meaningful difference and thus diversity?

The criteria for diversity include:

- Educational mission, derived from such sources as historical origins, educational philosophy of the current leadership, and law
- Educational programs
- Quality, or aspirations with respect to quality
- Institutional environment, as influenced by such factors as residential or commuter campus, faculty characteristics, peer interactions, and extracurricular activities
- Instructional modes, techniques, materials, and delivery systems--a basic distinction being between approaches which are traditional (lecture, discussion, laboratory study, independent study, tutorial) and those which are innovative (multimedia, programmed instruction, modular instruction, mastery or competency-based learning, computer-assisted or computer-managed instruction)
- Form of governance
- Location
- Characteristics of the students, student subcultures, academic programs, and nonacademic experiences

Conceptually, diversity is far easier to handle than is either access or excellence. Diversity may be defined as perceived difference, though the perceptions of students, faculty, and administrators need not correspond. Diversity really involves classification rather than measurement: Is this institution similar to or different from that institution? Assertions about diversity do not require saying *how* different; not even a rank ordering is implied, much less a numerical rating.

Several current classification systems for higher or postsecondary institutions have concepts of diversity at their core, incuding those devised by the Carnegie Commission and others by FICE and NCHEMS, which all differentiate among educational missions. All of these systems represent significant improvements over the classification scheme that government agencies use for reporting most higher-education data--the six-way split of public and private universities, four-year colleges, and two-year colleges.

A practical need for more precise classification of institutions arises when doing comparative financial analyses. For instance, at the American Council on Education, in the Economics and Finance Unit, we have been coordinating a Financial Measures project intended to help accelerate improvements in measuring the financial conditions of higher-education institutions. In the course of this project, we have been faced with the necessity of measuring, or more precisely, of specifying, diversity, and its obverse, similarity, at least along financial dimensions. In order to make financial comparisons among appropriately grouped peer institutions, it is necessary to classify institutions as similar or different, and we are working with individual institutions to develop the criteria for classification which they judge appropriate for their purposes. It appears at this point that self-selected peer groups may be a much more heterogeneous lot than heretofore supposed.

Even though there are diverse approaches to diversity, no great debate rages around its definition or measurement. The elements of diversity are, by and large, classifiable, if not measurable. The robustness and validity of various classification schemes based on concepts of diversity can be judged by the consistency over time of the sorting that results from the scheme (for instance, grouping together the same research universities on the basis of amounts of federal research performed, although amounts vary from year to year), and by the ability of the labels applied to groups of institutions to generate reasonable consensus in their interpretation.

Possibly the greatest expansion in our concept of diversity occurred in the early 1970s, when our horizons broadened from higher to postsecondary education. With the publication of the report of the National Commission on the Financing of Postsecondary Education, the list of institutions was expanded from 3,000 to about 10,000. We do not know precisely how this expansion has affected diversity, but the procedures for measuring those effects are at hand: first, categorizing as sensitively as possible, and then counting.

Much more difficult than defining diversity is making judgments about how it is affected by financial exigency or governmental activity. Has the financial crunch stimulated new programs in the search for new student clienteles? Or has it prevented the investment of resources in new programs? Have governmental planning, budgeting, and regulation resulted in less diversity or more? Is there too much diversity in some areas: for instance, where educators have created new programs but lacked the courage to shut down the old ones withering along side?

Though diversity is almost always considered only in educational terms, we should recognize also the existence of social diversity. There need not be black mathematics or female geography, but black institutions and women's colleges may be needed to serve diverse populations by strengthening their social identity.

And finally, evaluating the effects of diversity on education outcomes represents quite a different order of conceptual and measurement difficulty than does simply defining diversity.

EXCELLENCE

Of the three values we are considering here, excellence is the most difficult to define and measure. Indeed, some educators believe that it is not measurable, that its essential qualities cannot be described in quantifiable terms.

By way of reply, I would start by asking not whether we can define or measure excellence but whether we can recognize it, as we recognize a beautiful sunrise. I argue that we can recognize excellence in education, that we do recognize it, and that in many cases, we have even developed a high degree of consensus about who has achieved it--though there are some strenuous objections that a consensus does not, by itself, actually prove quality. Nonetheless, this consensus is evidenced by the consistency, at least at the very high and low ends of the spectrum, of the reputational ratings of graduate departments in studies conducted by Allen Cartter and by Kenneth D. Roose and Charles Andersen. There is also a correspondence between the ratings of the departments in the two studies, the first done in 1964 and the second in 1969. Excellence is also recognized when many institutions identify similar feeder schools for faculty recruitment. More broadly, assessment of academic quality is at the core of evaluation criteria developed over the decades for the purposes of accreditation of institutions. We recognize excellence, though sometimes our perceptions lag behind the realities.

Our relative ability to recognize excellence in education and to develop consensus about it contrasts with our inability to recognize, say, justice and equality in education. Does justice (not politics) require that we support the University of California or Allan Bakke? Is equity better served when we aid many students with small grants or a few students with large grants?

In arguing that excellence is not measurable, and even that it ought not be measured, educators create for themselves an unacceptable dilemma. For if excellence cannot be measured because it cannot be recognized, then no persuasive case can be made for spending money to achieve excellence. But if excellence can be recognized, then it can also be defined and measured. The problem becomes one of developing sufficiently sensitive scales. Short of being able to measure excellence in an absolute sense, we can at least start by measuring trends in the factors that we believe contribute to excellence.

One difficulty in measuring excellence is that when we should be focusing on outputs, we focus instead on inputs, or on proxy variables that represent inputs, such as faculty degrees, or the institutions where the faculty earned their degrees (which results in a neat circularity in measuring the excellence of institutions), publication records, research funding attracted, expenditures for libraries and other facilities, or educational expenditures generally. Measures of excellence should be developed, of course, for the range of activities that an institution engages in, and they should differentiate its performance in the creation of new knowledge and in teaching. Excellence in the public-service functions of postsecondary-education institutions depends much more heavily on community assessments of outcomes and less on educational criteria, as such, and is not discussed in this paper.

THE CREATION OF NEW KNOWLEDGE

In assessing institutional quality in the creation of new knowledge, we already have a relatively refined process in the peer-review system. Though sometimes attacked as elitist and self-confirming or criticized for concentrating scarce resources on accepted rather than innovative approaches, the peer-review system does lead to an enormously productive education-research capacity. In most cases, those who challenge the peer-review process do so not on the grounds that it results in excellence being attributed to institutions or programs that do not in fact deserve it, but rather on the grounds that the process defines excellence too restrictively and that the definition should be extended to cover a wider range of educational activities.

Recently, concerned with both the subjective, possibly arbitrary or biased results of the peer-review process using reputational ratings and the partial or imperfect representation of the many dimensions of educational excellence by any single index of program quality, the Council of Graduate Schools undertook a major research effort attempting to develop objective and multidimensional criteria for assessing quality in graduate education. The study, which took more than two years, was financed by the National Science Foundation and was performed in conjunction with the Educational Testing Service. The study evaluated productivity and performance in departments of chemistry, psychology, and history at 25 institutions. The survey was designed with multiple assessment criteria in six major areas presumed to relate to program quality--faculty, students, resources, environment, academic offerings, alumni--and self-rating of overall program quality. The indicators reflecting the many characteristics contributing to program excellence were then used to construct departmental profiles enabling graphic comparisons of quality assessments (figure 1). Critics of the study have argued that though the quality assessment is multidimensional, many of the individual criteria are, in essence, as subjective as are the peer ratings.

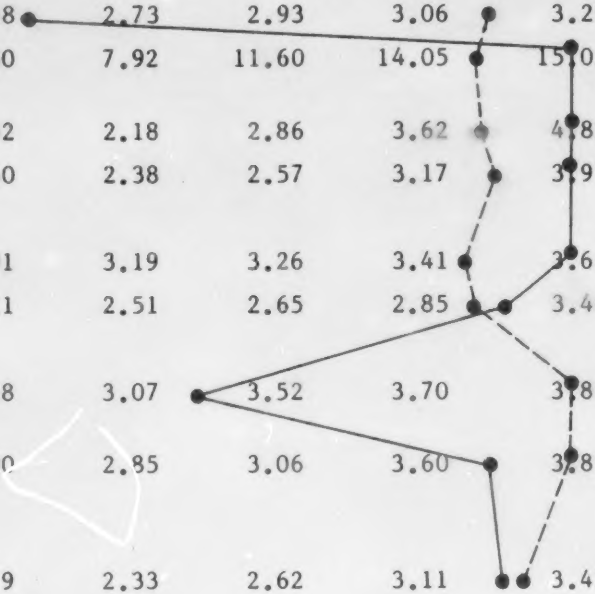
A major conclusion derived from the study is that indicators of educational quality should relate to program emphasis, differentiating among those preparing researchers, teachers, or practitioners, and that conventional indicators of quality have been influenced preponderately by the traditional research and scholarship model.

One finding of the study was that external indicators of quality (such as reputation and resources) are correlated, and that internal indicators (such as student satisfactions and learning environment) are correlated, but that the external and the internal quality characteristics are not necessarily correlated with each other.

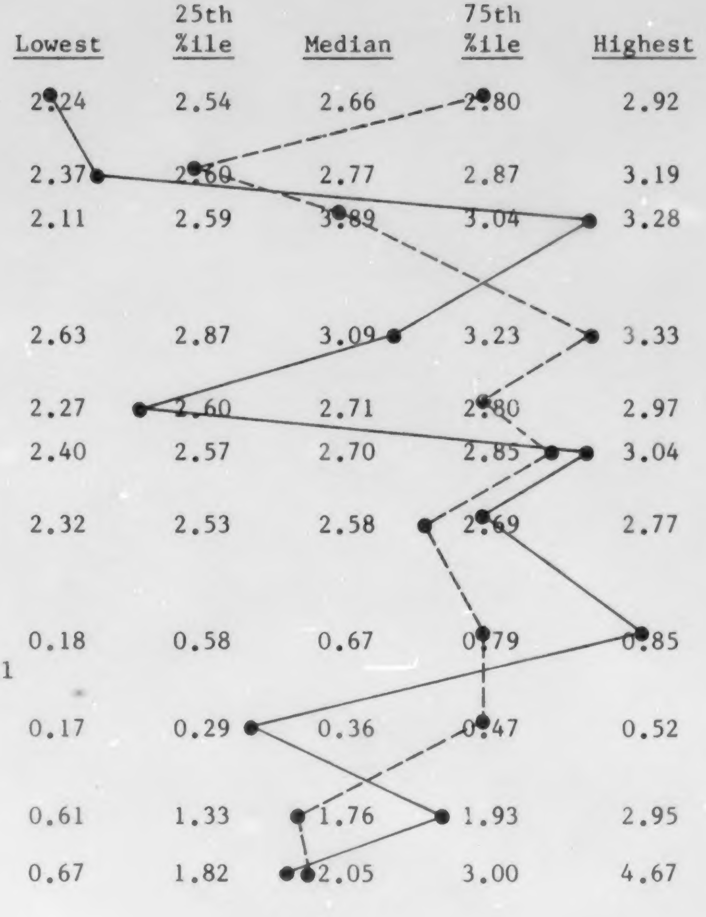
The study finds that peer ratings are generally stable over time, consistent across raters, and correlated in expected ways with other program characteristics, and concludes

Figure 1

Dimensions of Quality Profile for Two Chemistry Departments

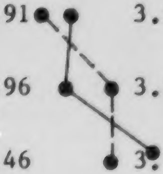


	Lowest	25th %ile	Median	75th %ile	Highest
Faculty:					
1) Student-rated quality of teaching	2.58	2.73	2.93	3.06	3.29
2) Mean number of articles/book reviews in last three years	5.30	7.92	11.60	14.05	15.05
3) Peer-rated quality of graduate faculty	1.02	2.18	2.86	3.62	4.82
4) Research activity	1.60	2.38	2.57	3.17	3.97
Students:					
5) Undergraduate GPA	3.01	3.19	3.26	3.41	3.64
6) Student commitment/motivation	2.21	2.51	2.65	2.85	3.46
Resources:					
7) Faculty ratings of library holdings relevant to their field	2.38	3.07	3.52	3.70	3.86
8) Faculty ratings of laboratory or other equipment needed for teaching and research in your field	2.00	2.85	3.06	3.60	3.89
9) Faculty ratings of overall adequacy of physical and financial resources for doctoral program in your field	1.79	2.33	2.62	3.11	3.42



	Lowest	25th %ile	Median	75th %ile	Highest
Environment:					
10) Student-rated faculty concern for students	2.24	2.54	2.66	2.80	2.92
11) Student-rated environment for learning	2.37	2.60	2.77	2.87	3.19
12) Compatibility of faculty work environment	2.11	2.59	3.89	3.04	3.28
Academic Offerings:					
13) Overall student satisfaction with program	2.63	2.87	3.09	3.23	3.33
14) Student rating of curriculum	2.27	2.60	2.71	2.80	2.97
15) Student rating of assistantship experiences	2.40	2.57	2.70	2.85	3.04
16) Alumni rating of dissertation experiences	2.32	2.53	2.58	2.69	2.77
Alumni:					
17) Percent of alumni who declared program prepared them for career extremely well	0.18	0.58	0.67	0.79	0.85
18) Percent with job highly related to graduate training	0.17	0.29	0.36	0.47	0.52
19) Mean number of articles/book reviews	0.61	1.33	1.76	1.93	2.95
20) Presentations at regional or national meetings	0.67	1.82	2.05	3.00	4.67

	Lowest	25th %ile	Median	75th %ile	Highest
Self-ratings of Overall Program Quality:					
21) Faculty self-ratings of scholarly excellence of overall program	1.77	2.32	2.69	2.91	3.54
22) Student ratings of scholarly excellence of program	2.35	2.56	2.87	2.96	3.26
23) Alumni ratings of scholarly excellence of program	2.39	2.91	3.17	3.46	3.72



Source: Mary Jo Clark, Rodney T. Hartnett, and Leonard L. Baird, Assessing Dimensions of Quality in Doctoral Education: A Technical Report of a National Study in Three Fields (Princeton, N.J.: Educational Testing Service, 1976), pp. 11-22.

Note: In this example, the solid line represents department P; the broken line represents department T. Both departments are quite large (there are more than 200 FTE doctoral candidates in each department) and place extreme emphasis on preparing scholars/researchers.

that peer ratings are one appropriate and useful indicator of faculty quality, but are not sufficient as a single criterion for program quality.

The authors concluded that multiple-criterion studies can, in fact, be done with good results but depend heavily on participant cooperation. The questionnaires were felt not only to be more objective, but to emphasize the process of self-evaluation. A positive by-product of the multiple-criterion evaluation was seen to be a reduction in the "halo effect" of reputational ratings. The evaluation process was regarded as an investment, rather than an expenditure, and the authors concluded "that it is possible to obtain much more extensive information about program quality than is usually utilized and that it can be done without vast expenditures of time and money."[4]

TEACHING

Excellence in teaching means effectiveness in teaching. Most of the analytic work on teacher effectiveness--what goes on in the classroom and how it affects what students do beyond the classroom--has been done at the elementary and secondary levels. Indirectly, these assessments of teaching effectiveness at the lower grade levels reflect the effectiveness of the college teachers who taught the elementary and secondary school teachers.

Typically, data are analyzed with models constructed to assess the relative effects on student achievement or ability, family, peers, teachers, and schools. Economists and educational psychologists trying to build education production functions--models relating inputs to outputs--have argued that much more attention should be paid to what goes on in the classroom (or wherever else learning may take place) and much less to family background.

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[4] Council of Graduate Schools in the United States, The Assessment of Quality in Graduate Education: Summary of a Multidimensional Approach (Washington, D.C.: Council of Graduate Schools in the United States, 1977), p. 20.

But in his book Inequality (1972), summarizing a vast amount of research in this area, Christopher Jencks shook the education world by concluding that schools and teachers do not matter, that they have little effect on student outcomes. If schools or teachers do not matter, or if the characteristics which do matter are not part of the decision-making processes in organizing and financing educational programs, then the whole system is inefficient, if not worse. Jencks's conclusions have been challenged, however, on a number of counts.

One such challenge has come from Daniel F. Luecke and Noel F. McGinn, who report on a model they constructed simulating an educational process over time, with causal relations built into the model. (For instance, the quality of the teacher determines the probability of a student's advancing one grade level.) Then using data generated by the simulation model for the last period run and study designs taken from recent analyses, cross-sectional analysis was performed, finding that schools do not matter. It should be emphasized that the data used in the cross-sectional analysis did not come from the real world, but rather were generated from preset causal relationships specified in the model; the intention of the researchers was not to identify actual relationships, but to demonstrate the weakness of the research designs used in previous studies. Consistently, the cross-sectional analyses, which were based on standard multivariate techniques, overestimated the influence of the family and underestimated the influence of the schools and the teachers. This finding suggests that excellence in teaching is not immeasurable, but that we need a second or third generation of analyses, with much improved statistical techniques.

Another consideration in assessing teaching excellence or effectiveness is the often-reported finding that within-year gains resulting from educational programs (particularly compensatory-education programs) do not necessarily add up to longer-term gains. But is this loss attributable to failures in the educational system or to failures in the social system, with its persisting barriers against greater equality of opportunity?

Apparently, what is learned is also forgotten. Harold Hodgkinson has brought to our attention work tracing retention of learning over time, which depicts graphically how rapidly we forget what we have learned--the learning and forgetting "humps" look very much like the outlines of the snake who swallowed the elephant in the St. Exupery story of Le Petit Prince.[5] Given this forgetting, the implication is that in measuring teaching effectiveness, we should shift the focus from learning rates to retention rates and raise basic questions about the curriculum: how is it organized, in what ways is it relevant, and in what sequence is it taught? How much is remembered?

Patricia K. Cross has made us aware that in the traditional educational process, the unit of time is fixed, and the level of student achievement varies.[6] She suggests that in some areas of learning, this pattern should be reversed; that is, the level of achievement should be established, and the time to accomplish it permitted to vary. Such an approach would have implications for the measurement of teaching effectiveness. The usual criterion for measuring teaching effectiveness which is the relationship of the level of resources expended to the level of student achievement, would be replaced by an assessment of resources expended in relation to time expended to achieve a particular level of performance.

In measuring the excellence of teaching or the value of education, we need to look far beyond the use of education that a student makes on the first job or any job. This too narrow economic criterion of performance fails to embrace the classic objectives of liberal higher education: the development of the individual's ability to think critically, to appreciate deeply, and to act humanely.

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5. Harold Hodgkinson, "Governance, Evaluation and Accountability in Higher Education," presentation to the ACE Institute for Academic Deans and Business Officers, Orlando, Fla., March 1975.

Based on hypotheses about learning discussed by Sidney Drumheller, in "Behavioral Objectives as Learning Inhibitors: A Dilemma and a Solution," Educational Technology 14 (October 1974): 17-20.

6. Patricia K. Cross, "Learner-Centered Curricula," in Learner-Centered Reform--Current Issues in Higher Education, ed. Dyke Vermilye (Washington: Jossey-Bass, 1975), pp. 54-65.

CONCLUDING OBSERVATIONS

I want to close with some remarks on the function of education indicators in the formulation of public policy. Education indicators should be developed and improved to guide the budget decisions that allocate resources within the postsecondary system and within institutions. The great concern about the adequacy of these indicators is the defendability of decisions based on them--or, even more importantly, the risks of decisions based on them possibly eroding or destroying the diversity and the excellence of education.

The need for development of indicators is seen by some sharply critical economists as flowing from imperfections in the competitive market for education. Because education is subsidized, they argue, demand is inflated to the point where it exceeds supply, and the indicators are used to impose rationing on the educational system. According to this school of thought, if the imperfections in the competitive market were corrected (that is, if subsidies to institutions were eliminated), then the need for education indicators would evaporate, to be replaced by student choices in the marketplace.

Ultimately, the need for indicators has to be judged in the context of their function. In the domain of education, we must consider whether there is a greater likelihood of achieving the social goals of access, diversity, and excellence by rolling back subsidies to education in an effort to create more competitive markets or by using subsidies, invested as guided by education indicators, to try to compensate for imperfections in the competitive market. Given the obdurate persistence of gross inequalities in our social system, I believe greater access, and possibly even greater diversity and excellence, will be achieved more by improving education indicators and using them sensitively than by relying, to a still greater degree, on competitive market mechanisms.

One final comment. We opened with the question: Can we measure our values? I would like to close with a question: Can we measure our commitment to those values? We often act as if our commitments to diversity and excellence were beyond measure. In contrast, our commitment to access is surely too measured.

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Pricing Our Values: What Needs Costing and What Is without Price?

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INTRODUCTION

How valuable is college? Obviously, very valuable. College graduates live longer, occupy more command jobs, divorce less, vote more, need welfare less, volunteer more often, keep better informed, express higher satisfaction with life, enjoy higher esteem, experience fewer accidents, display less parochialism, adjust more quickly, get more jobs, and receive higher lifetime incomes. College graduates "have a greater sense of well-being," are "less concerned with material possessions" and "more concerned with aesthetic and cultural values," are "more self-disciplined" and "articulate" and aware of historical and geographic relationships. They are "more tolerant" and less prone to violent solutions.[1]

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[1] Quotes from Frank Rhodes, Stephen Withey, Harold Howe, and Peter Bell as cited by Peter D. Bell, "Is a College Education Worth It?" in Students and Their Institutions: A Changing Relationship, ed. J. W. Peltason and Marcy V. Massengale (Washington, D.C.: American Council on Education, 1978), p. 181.

Graduates stopping at high school are one and a half times more likely to be unemployed.[2] If those same graduates would complete four years of college, human-capital theorists estimate their investments would return 10 percent to 15 percent per year in higher personal earnings and 9 percent to 14 percent in societal benefits.[3]

The evidence favoring higher education is overwhelming. Yet from Richard Freeman's "Declining Value of a Higher Education" to the fact that a smaller proportion of the 1977 high-school graduates opted for college, the challenge is on to prove that higher education is worth it.

Proving the value of college to a skeptical legislator or student is difficult, dangerous, and necessary. Measuring value is difficult, because legislators, students, and educators each have different value agendas. It is dangerous because data standardization could strangle educational diversity and freedom from political domination. Proving worth is necessitated by the overcapacity of the system, entry of new competitors to traditional colleges, and the large public and private subsidies now going to higher education.

ALTERNATIVE MEASURES

There are no good alternatives for measuring value. The Dictator Technique (a control planner imposes values upon choice) is antiethical to a society which believes in consumer sovereignty and multiple cultures. The Dictator Technique must be rejected as un-American.

The Opinion Technique has great promise but is yet inoperable. In 1970, I proposed such a framework.[4] By this scheme, five objectives of a university are identified as whole growth, specialized growth, growth in the pool of knowledge, growth in society, and the joy of growing and being in an educational environment. Each objective is then subdivided into goals. For example, "whole growth" becomes learning to feel, to retain facts, to think, to decide, to act, and learning to learn. Then for each goal, multiple measures are devised. For example, whether college enabled a student to "learn to retain facts" is measured by student testimony, by comparing percentile ranks on the SAT and the GRE, and by comparing before and after scores on a listening-reading retention test. In all, there are five objectives, 20 goals, and 40 measures.

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[2] U. S., Department of Labor, Bureau of Labor Statistics, The Occupational Outlook for College Graduates, 1977, p. 20.

[3] Independent estimates by Becker, Hines, Hanoch, Raymond, Sesnowitz, Psacharopoulos, and Schultz are summarized by Alexander Kern, "The Value of an Education," Journal of Education Finance 1 (Spring 1976): 462-64.

[4] David G. Brown, "A Scheme for Measuring the Output of Higher Education," in The Outputs of Higher Education: Their Identification, Measurement, and Evaluation, ed. Ben Lawrence, George Weathersby, and Virginia W. Patterson (Boulder, Colo.: Western Interstate Commission for Higher Education, 1970), pp. 27-38.

The scheme then allows each person or group to weight the 40 measures according to his/her own criteria. A student might put, for example, a higher weight than faculty on "starting salary at first job," because "growth in ability to earn a living" is thought to be more important in student's minds. Or a student might place greater credence on "student testimony," whereas faculty might have more confidence in "faculty testimony" as a measure. In any case, the bias of the rater can be reflected, and a comparative analysis can be made of the overall value to the rater of (say) two colleges, or two majors at the same college. The judgment of value is only relative (one is more valuable than the other), and it is unique to the valuer. The ability of this scheme to reflect different criteria for judging by different people is, in fact, both its greatest strength and greatest weakness. Regrettably, the Opinion Technique is still largely theoretical. The values assigned by each valuer don't add. Satisfactions are too personal to convert to meaningful members. The technique is cumbersome to apply. And fundamentally, the popularity contest as a means of determining values leaves much to be desired.

These difficulties force us, for the moment at least, almost against our will to choose between not measuring value and the Market Technique. The Market Technique postulates that the value of a botany major is what an individual tuition payer plus governmental and philanthropic and faculty subsidizers are willing to pay. Value = Price + Subsidy. Here subsidy includes the cost overrun covered by the college from endowment income.

Because the Market Technique is familiar (it's already used to value dresses and autos), is beguilingly simple, resolves the issue of "whose values," and is the only operational technique, it will be used, like it or not. Clearly, the technique has major drawbacks. Only factors with market value are considered. Only people with money get to vote their values. Programs are often undervalued because higher tuitions and subsidies would have been paid if the charges were higher. Yet since value choices must be made, funders will make them, and they will use the only technique available, the Market Technique. I neither advocate nor endorse the technique but merely comment that it is the means now being used to value higher education. It is the lowest commonly agreed-upon denominator. Value = Price + Subsidy.

Measuring even Price + Subsidy is difficult but not impossible. Fortunately, the same New Competition that is forcing higher education to outcome valuing is also simplifying the measurement of Price + Subsidy. Economic theory tells us that in a fully competitive industry, Price + Subsidy will tend to = Cost. Thus as higher education becomes more competitive, cost becomes an increasingly accurate measure of value. We can use the shorthand of Value = Cost. The task of valuing therefore becomes the task of costing.

THE NEW COMPETITION

When bureaucratic costing systems are broached, my first impulse--much like professional-sports management reacting to Ralph Nader--is to urge overzealous systems designers to go away. Higher education has met the incredible challenges of training ministers for the New World, transforming agricultural productivity, and playing technological catch-up after Sputnik without systems for costing, pricing, and valuing. It can meet the new challenges of energy, literacy, and jobs in the same way. It can meet the new challenges without risking the proliferation of bureaucracy, political domination, malicious manipulation of data, and shaping the entire educational process to achieve questionable scores on unproven tests of unimportant competencies.

But this first impulse is nostalgic and unrealistic. These are new times. Competition has come to higher education. The economist's competitive triplet of many buyers, many sellers, and full information describes higher education today. Student buyers exceed 10 million per year College credits are being sold not only by 3,000-plus colleges and universities (double the number of only two decades ago), but also by the U.S. Armed Services, the University Without Walls, Xerox Corporation, and the proprietary Southern Ohio College. Courses are taken by television, by correspondence, by newspaper, and by experience. Credits are earned through employers, educational consortia, labor unions, police departments, vocational secondary schools, and libraries.

And information systems are vastly improved. New hoards of college recruiters, a new respectability for advertising, vendors of lists of potential college students, the neatly universal use of ACT and SAT testing, new laws of disclosure, standardization of data systems, the ever-increasing plethora of college guide and tip books, and the batch of new legislation mandating accurate and honest catalogues are all contributing to the better operation of what was previously a market of ignorance and partial information.

Higher education has become one of the major competitive industries in the United States. Prospective students enjoy many real choices. The era of uninformed students opting for a college recommended by a trusted mentor, or opting for the only college within geographic reach, or choosing the college sponsored by the church is over.

IMPLICATIONS OF COSTING, VALUING, AND THE NEW COMPETITION

1. In the new era of New Competition and Costing, expenses and incomes will not only tend to be equal for all programs together, but they will tend to be equal for each identifiably separate program. Each program will tend to sit on its own bottom. Colleges charging $1,500 for a freshman year as a business major which only costs $1,000 to produce will be undersold and soon without business majors. Colleges pricing a music major which costs $2,000 at a $1,500 tuition will be inundated and (if subsidy is not available to cover the gap) soon bankrupt.

2. In the new era, like it or not, each academic major, perhaps each course and each service (English literature and intramurals), will carry its own price. This price will reflect directly the cost of the course plus the subsidy paid by others, such as donors or federal governments. Already, many of us charge different tuitions to graduate students. Some charge medical students more. Many have laboratory and music practice-room fees. Why not extend

these concepts to undergraduate majors? Why not use price variations as reflections of different quality? As a means of influencing student choice? As a bulwark against students flocking to low-cost/low-price programs elsewhere?

3. In the new era, cost data will be organized by purchasable units. Most of us now have cost and budget data by teaching departments plus a large block of unassigned costs in the library and the computer and the physical plant and central administration. Entry into differential pricing will require the arrangement of information on both costs and subsidies of the smaller units that are actually bought and sold. College presidents will need to know the worth of a sociology major to persuade a perspective student, the worth of a set of laboratory experiments on seed hybridization to attract governmental funding, the worth of foreign students mixing with American undergraduate students to decide whether to fund foreign-student scholarships. The packages purchased are consumed by particular individuals and groups and are the ones for which cost data must be developed.

4. In the new era, internal prices will take on increased importance. If department chairs are to choose wisely among improving instruction by hiring a part-time faculty member, assigning a self-guided project on the computer, and commissioning a new set of audiovisual aids, the discretionary dollars must be decentralized to the department chair, and cost-related prices must be known on each alternative.

5. The new era will bring new packaging. Many students will want to buy a single course, often without the peripheries of access to a counseling service, or admission to a football game, or the right to attend a special lecture. It is necessary to require all students living in the residence hall to take their meals there? Why must each undergraduate student pay $10 for a football game, regardless of attendance?

6. The new era will force specialization. Colleges will focus upon strengths and consolidate efforts around distinctive programs. We are leaving a period of helter-skelter expansion in which colleges were expected to do everything, including a great deal that other institutions with time could do better. Now those other institutions are developing. As the achievements of these other institutions are valued, the mystique that is now holding students at traditional colleges will evaporate. In those areas where other institutions can

do a better job for less, should we not pull out before we are forced out? Is it still necessary to provide a student health service? Does every college campus need its own computer? Do we use all the data we collect?

IMPLICATIONS FOR LEADERSHIP

As the Market Technique is forced upon us, the leadership mandate is to preserve the self-directed character of higher education. This means:

1. Never ever sacrifice decentralization for efficiency. The distinctive characteristic of the American college is its curious conviction that individual professors know better how to organize the educational process than do their presidents. As the "new competitors," aided by values research, demonstrate that a centralized organization can teach some students some things better and faster, it will be very tempting for colleges to adopt these same centralized strategies. When they do, they will become industrial and business enterprises, and not very efficient ones at that. The better strategy is to allow some of these new competitors to take over some of this business and to specialize in those aspects of education which can be produced only in a decentralized environment that is free of political or donor domination.

2. Subvert all attempts to standardize cost-data collection. The ability of the American university to serve as social critic, to develop within students a capacity for critical analysis, and to explore unpopular frontiers rests upon its freedom from political domination and, in turn, its decentralization. The utility of the college, as one among many institutions, is its freedom, not its efficiency.

As we develop techniques for costing and valuing, above all, we must guard against even the possibility of centralization and politicization. We must resist all pressures to become more efficient through standard architecture, curricula, and costs at the sacrifice of choice and freedom to explore.

In my mind, the finest antidote for centralized data is the collection and analytical use of data locally in customized format that best serves local needs. We need conscientiously to obscure the possibility of comparability between institutions, even as we assure utility for the governing board. The collection of comparable interinstitutional data, beyond fundamental statistics such as enrollment and budgets, is (much like atomic energy) too risky to be worth doing.

We should not devise systemwide and nationwide valuing structures. Instead, we should implement believable costing and valuing schemes to inform decisions primarily at the departmental and program level.

3. Speak out for the noneconomic components of value, for the civilizing and culturizing and humanizing and self-actualizing aspects of college, for intellectual and moral and cultural values. The extent to which these more subtle elements can be presented in a convincing manner is the extent to which students will choose quality over price.

4. Invest in outcomes research. Because I have full faith that the traditional college education will be shown to be superior to the new and partial alternatives, it is crucial for colleges and universities to accelerate the development of techniques for measuring the values of college educations that are not exclusively market related.

CONCLUSION

The new competition in higher education is accelerating the quest for adequate measures of value. The quick-and-dirty evaluation strategy will be market dominated and will require most colleges to follow consumer demand by pricing and packaging programs competitively. Until new techniques are developed for measuring noneconomic values, most colleges will increasingly have an opportunity to focus upon that which they do best. These are times for focusing, for consolidating, and for enriching the contribution of American higher education to the nation. At long last, if only we have the wisdom to do so, we can return to our primary mission of discovery without being distracted into selling services better provided by others.

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The Tuition Advance Fund:
A New Proposal for Funding Higher Education

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President
Boston University

I should like to begin by saying that the apparent balance of our panel tonight is specious. Although I come from the independent sector and President Terrell from the state sector, I am not speaking as a representative of the independent sector, or even as a citizen of it. I believe that the interests of the two sectors in our system of higher education are essentially the same. This is especially the case with regard to the topic I am discussing tonight--the financing of higher education. Although most of you know that I yield to no one in my support of the independent sector, I have spent the majority of my teaching and administrative life in the state sector, and my diverse experience has persuaded me that we have a single system of higher education with largely congruent interests.

Values have long been a cottage industry in higher education and are now rapidly attaining the status of mass production. Most of our values have been the object of relentless examination, and few of the beliefs common among academics at the end of World War II have been spared the most searching scrutiny. One set of values, however, has been relatively safe from scrutiny: those implicit in the way we finance ourselves. Aside from the routine piety that if we accept federal aid, we must expect federal regulation, the bottom line in our fiscal deliberations has almost always been purely financial.

Tonight, I want to examine some of the values implied by our present method of financing higher education, suggest that they are dissonant with the rest of what we believe, and propose some new arrangements for financing higher education that can reduce the dissonance.

To begin with, we should recognize that higher education, considered as an economic good, is a very unusual phenomenon. Several economists have noted this. Several years ago, Norman Matlin published a book with the stimulating, if somewhat brittle, thesis that what we sell in higher education is not education but prestige, and that a good deal of our financial difficulty grows out of our inability to face this fact and act accordingly. About the same time, James Buchanan and Nicholas Devletoglou collaborated in an equally stimulating work, arguing that although higher education is itself the economic good we sell, the fact that we always sell it well below the market price ensures that it will always be valued less highly than we wish it to be. Neither of these works, which might reasonably have provoked further discussion, attracted much attention among academics.

Some of our economic anomalies are well known. For one, higher education is invariably supplied to the consumer at a price well below the cost of production. In a state-supported college or university, this price is typically one-fifth of the cost of education, although it may be as low as one-tenth. Even with the higher tuition charged in the independent sector, few institutions support themselves entirely out of tuition. The price charged to the consumer in the independent sector ranges from more than 90 percent of cost to less than 50 percent. Another way of saying this is that every college student, no matter how rich, is on a kind of scholarship, the value of which may exceed $4,000 a year.

Another well-known anomaly is implicit in these figures: the tuition gap. Although as a whole, the two sectors contain institutions of comparable quality, the tuition prices differ enormously. That is, goods of the same quality are sold at vastly disparate prices, sometimes varying by a factor of 10. In any other industry, this would be called cutthroat competition. We do not call it that in higher education, because such price cutting does not have the effect it has in other areas. The tuition gap is an ever present and agonizing reality for most of the independent sector, but so far, most of that sector's institutions are surviving it.

But there are some less frequently observed anomalies. When we come to evaluate the price and value of higher education, we approach the condition delineated in Oscar Wilde's famous definition of a cynic: we know the price of almost everything and the value of almost nothing. Attempting to rate education as value added to human potential, the Bureau of the Census has developed figures that suggest that over a working life, the average college graduate makes $232,000 more than the average high-school graduate. But this tells us nothing at all about the value added by a particular college education. As a figure, it is no better than saying that over 50 years, the worth of the average house appreciates by 800 percent. It does not tell us anything about the value of individual houses, some of which are overpriced to begin with, some of which are underpriced, and some of which burn to the ground the year they are built.

Similarly, lifetime-earnings figures tell us nothing about the financial value of a college education, for this value is very heavily dependent on the native abilities of the consumer who purchases it, the background he comes from and to which he returns, as well as on the use he puts it to. For these reasons, it is impossible to make the price charged to a student equal to the value of his education. Even if by some miracle of omniscience we could do this, the resulting tuition scale would make higher education free to the least competent and least enterprising, and prohibitively expensive to the most skillful and most hard-working.

Finally, higher education is an extremely expensive commodity--more costly than all but a few exotic automobiles, and as costly as some houses. But unlike automobiles and houses, it has little if any value as collateral. Yet for the even moderately successful person, the actual financial value of a college education increases cumulatively with each year. Although this increase is analogous to the annual appreciation of a well-maintained house, no bank would lend money for a higher education on a 30-year mortgage.

To deal with these and other fiscal anomalies, we have constructed a system for financing higher education so ramshackle that we should be amazed that it works at all. At one end of the sector, the states finance education largely through tax revenues, supplying an extremely expensive good to all comers at a fraction of the cost of production. (Even so, this price is often too high for the most impoverished members of society, many of whom stand to derive the greatest relative financial benefit from higher education.)

On the other side, the independent sector tries, through needs criteria for financial aid, to limit subsidies to those who need them. But few schools actually charge even their most affluent students the full cost of their education: all students get some subsidy, and generally, the richer the school, the greater this automatic and indiscriminate "scholarship." Even with such subsidies, the schools of the independent sector charge a tuition price that either puts many parents heavily in debt, or, as parents become unable to assume such debt, puts many students heavily in debt at the start of their working careers.

To help pay the cost of education for students in both sectors, the federal government has established programs of student aid that mesh, with varying degrees of success, into widely different programs and conditions that obtain in the various states. The more we perceive the ramshackle nature of this system, the more we patch and complicate it: its very management now requires substantial institutional commitment of time and money and a burgeoning federal bureaucracy to administer it.

In constructing our total system for financing higher education, we have not considered seriously who benefits from higher education and how much of the benefits should be paid for by the beneficiary.

It is easy to say that the benefit of higher education is partially bestowed upon individuals and partially upon society. But because it is hard to measure the societal benefit, it is very much harder to apportion the benefit between the two. Because the average college graduate makes, over a working lifetime, $232,000 more than the average high-school graduate, the average personal financial benefit from higher education far exceeds its total financial cost. If an individual were to pay for all his higher education, he would receive direct financial benefits far in excess of what he actually paid; he would receive its extensive nonfinancial benefits gratis; and society would receive its vast benefits as a dividend.

In theory, there is no reason why, on the average, the total cost of higher education should not be borne by those who receive it. Now, from my Kantian studies, I accept the proposition that whatever is sound in theory must also work in practice. The reason why no one would now think it practicable to require students to pay for their own higher education is that as we customarily require that higher education be paid for as it is acquired, rather than as it is used, few students can afford to pay while they are students. If we allowed students to pay later as they used their education, we would allow them to pay later over a lifetime. Indeed, our present system of student loans for higher education is a very inadequate attempt to allow payment over the period of use. Because it is inadequate, we fall back on other expedients for paying the costs that students cannot earn or borrow. Typically, we get some of it from parents, some from taxpayers, and some from philanthropists. These people are on the whole better able to pay for higher education than students are, but the parents--the largest, most helpful group--are not much better able to.

Further, some of these people--some of the parents and some of the taxpayers--never derive any direct personal benefit from higher education, because they never went to college. And others may have benefited neither directly nor indirectly from higher education. The poor pay taxes to fund higher education but may not share even in its societal benefits to a significant extent. Because the state provides its subsidy to all comers, all states tax the poor to assist in the education of the children of the rich. Taking from the poor to give to the rich is not behavior that most of us would consciously approve of, and yet our customary and generally unchallenged practice in funding the state sector does just that. Nor is the independent sector innocent of such inverted Robin Hoodism: it is not uncommon for comparatively nonaffluent parents to pay for the education of children who will some day be far richer than themselves.

Finally, in addition to these faults, the present system does not yet provide equal educational opportunity and provides even less for choice. It does not therefore express some of our most important democratic values. And if we have as a common value the belief that whenever possible, people ought to pay for what they get, we can see that our present system of financing higher education fails to express this value.

But we could design a system that could express these values, and tonight I want to outline a system for financing higher education that would do so. It is a system that transfers the primary responsibility for financing higher education to those who benefit most directly from it and does so in a fiscally sound manner that is fully consonant with our commitment to equality of educational opportunity.

The essential feature of this system provides that the federal government establish a revolving trust fund that would advance money to students in order to pay for higher education, and that students should repay these advances out of income through payroll withholding.

Before discussing such a plan in detail, I want to point out that it would differ fundamentally from our present loan programs. First, repayment would be contingent upon income. In an extreme case, a student who borrowed several thousand dollars from the trust fund and over the rest of his life never had any income would have derived no personal financial benefit from his education. He would, under the arrangement I propose, pay nothing for it. Its cost would therefore be borne by society as part of its commitment to equal educational opportunity. Conversely, a student who in later life made a great deal of money would, under a ceiling, pay for somewhat more than the cost of his education. This would not be a novelty in principle or in practice: through the progressive federal income tax, a financially successful student now contributes to present federal student-aid programs out of proportion to his benefit.

Second, repayment could be carried out over a very long period of time--the approximately 45 years comprised by a contemporary working lifetime.

Third, although the amount to be repaid would include a one-time service charge for administrative and other costs, there would be no interest charged on the advance. The federal taxpayer would initially subsidize the trust fund as part of the nation's commitment to higher education. But the trust fund would eventually become self-sustaining.

Finally, there would be no question of default. Anyone who received an advance from the trust fund would make annual payments through withholding until the advance was paid back. Only those who had no income would be exempt from repayment. In addition, after this plan has been subjected to careful actuarial study, we may find that it is fiscally and socially desirable to forgive from 25 to 50 percent of the obligations of nonemployed spouses.

Let me now present a somewhat more specific proposal. In drawing up this proposal, I have included a number of limitations aimed at developing a workable pilot program suitable for initial presentation to the Congress. The first of these restricts the amount to be advanced to tuition actually paid. There is no reason in principle why a student should not get an advance for all his expenses, but in the first years of the trust fund, it is important to limit the amount of the annual payout.

Next, the advances would be available only to undergraduates enrolled in degree programs in accredited institutions. Although this also has the effect of limiting the annual payout, its more important function is to recognize that the financial benefits of higher education derive not from miscellaneous study but from the completion of a coherent course of study and the possession of a degree. And although there is no reason in principle to exclude professional education, affluent professionals at least earn money to avail themselves of conventional loan programs, especially if they have funded their undergraduate education through a tuition advance.

Third, advances would not be available to freshmen. Ideally, the advances would go only to students who have demonstrated the capacity to graduate and are likely to do so. Limiting eligibility to those who make it into the second year is one way of helping to ensure that this will be the case. Since this system of educational advances would substantially reduce the need for such current programs as the BEOG and the SEOG, these programs could be remodeled to meet in full the need for freshman-year aid, to the end of assuring all students a chance to prove themselves reasonable risks for the Tuition Advance Fund.

Typically, tuition in the independent sector is $2,500 a year; a student in this sector could currently receive a maximum advance of $7,500. In the state sector, tuition is now typically $620 a year. A student in that sector could receive a maximum advance of $1,860.

Repayment would be made by a yearly payment of 1 percent of gross income, paid either through payroll withholding or (for the self-employed) estimated tax payments.[1] That is, someone who had a before-tax income of $20,000 would repay $200 in that year. Someone who had a before-tax income of $100,000 would repay $1,000 in that year. Someone with a before-tax income of $7,500 would repay $75 in that year.

These figures, of course, are determined on the basis of current tuition rates. Future borrowing, as well as future repayments, would need to be adjusted for inflation. Just how long it would take any one student to repay an advance would depend on variations in annual income. But a student who enjoyed a high income would repay quickly, and might, after repaying the original advance, continue to pay a surcharge--perhaps not to exceed 50 percent of the advance itself. I need not point out that a 50 percent surcharge on an interest-free loan repayable over decades is by no means usurious. And one whose income was, over a lifetime, seriously below the average would retire with a substantial portion of the advance unpaid and in effect forgiven.

The trust fund to handle these advances would not be an extremely costly project for the federal government. Although the available figures on enrollment by class in the two sectors are scandalously inadequate, estimates made by the Bureau of the Census suggest that approximately 1.20 million students in the independent sector and approximately 4.01 million in the state sector might be eligible to participate in a Tuition Advance Fund of this sort. The total annual advance that these students would be eligible for would be $5.5 billion--$3.02 billion to students in the state sector and $2.48 billion to those in the independent sector.

The magnitude of the total cost of a Tuition Advance Fund is best appreciated by considering that we now spend over half as much a year on candy, three times as much on tobacco, and five times as much on alcohol. The funding required is a little less than that consumed by building two Trident submarines.

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[1] Since this paper was presented, some of the fiscal elements of the Tuition Advance Fund have changed. For current figures, contact Steven L. Wagner, Boston University, Office of Public Relations, 19 Deerfield St., Boston, Mass., 02215 (617) 353-3662.

The cost of a Tuition Advance Fund is even more reasonable when we consider that it is, unlike most federal program costs, self-liquidating. If we inflate tuition and salaries at 6 percent annually, if repayments are placed in a trust fund and invested at 5 percent interest, and if Congress approppriates each year the difference between the cost of the advances and the income from repayments and interest, the tax subsidy required would decline annually, and within two decades, the annual income to the fund would equal its annual expenditures. In 20 years, the fund would be self-sustaining.

These costs will be seen to be even more reasonable when we consider how the program they fund can simplify the administration of federal student financial aid. For all students will become in effect independent of their parents, and no need assessment will be required for any of them. "Need," under such a program, is demonstrated by presenting one's tuition bill.

In the six years since I first began discussing this principle of funding, I have received many useful criticisms that have led me to specify certain safeguards. For one, in order to ensure that no institution takes advantage of the proposal to enact windfall tuition increases, I believe that institutions that accept students funded under these provisions should accept some cap on their tuition. It would be reasonable to allow institutions whose tuition is below the national maximum a one-time increase of 10 percent, and to index all tuition increases thereafter to the Consumer Price Index. For another, to avoid either the erection or conversion of existing institutions into diploma mills, eligibility should be made very difficult for new institutions or institutions that show excessive growth. We are entering a period when the student pool will be decreasing, and we should rightly discourage substantial increases in capacity.

I have also received some criticisms that seem to me on reflection to be ill-founded. One of these is that this proposal would set up a terrifying new bureaucracy. I see no need for or danger of this. A highly competent bureaucracy for the purpose already exists. The present woes afflicting the Social Security system result from the failure of Congress to balance OASI benefits and OASI payments. In the actual collection of the tax and payment of benefits, the Social Security Administration would need merely to establish a special Tuition Advance Fund account, a subset of the system it now provides for its OASI accounts. The payment of benefits in each TAF account would normally be concentrated for each account within a three-year period. I believe, in fact, that it would also be reasonable for the Social Security Administration to manage the trust fund and its cash flow. Its present systems ought to be easily adaptable to the new task.

It has also been suggested that such a system would impose great burdens on employers. I do not believe that this is so either. A new box would have to be added to the form on which employees claim exemption. This box would ask "Do you have an unsatisfied obligation to the Tuition Advance Fund?" For any employee who answered yes, the employer would forward an additional 1 percent of gross income to the funds processed for Social Security. In turn, whenever it found an individual TAF account finally repaid, the Social Security would send the account-holder a certificate of discharge, which he would take to his employer to secure suspension of the 1 percent withholding. These procedures have close analogues in the present administration of the F.I.C.A. tax, and present no novelties.

Another objection that has sometimes been raised is that there is no reason why higher education should receive a privileged position by being allowed to collect debts owed it through the withholding tax. This objection mistakes the reality. The debt is not owed to higher education but rather to the federal treasury. Further, the adoption of such a scheme would simply admit what is already the fact, that higher education is a national priority of the same order as health and welfare and deserving of similar government assistance for the administration of partial self-funding.

Finally, it has been suggested that this is a plan hostile and even dangerous to the state sector. I hope I am realist enough not to propose a program that is either of these. I know I am idealist enough. It should be realized that this proposal does nothing to narrow the present tuition gap, but simply defers its payment. Under a tuition advance scheme, I believe that those students who now prefer the state sector will continue to do so. In any event, the cap on enrollments I have suggested would prevent the independent sector from accepting any mass migration from the state sector, even if it materialized. Moreover, there are substantial affirmative advantages in this plan for the state sector. Its students will be benefited as effectively as those in the independent sector by being able to defer tuition payments. There are many state institutions at which tuition, although much lower than in the independent sector, represents a substantial burden for those who must pay it. For some students, even a highly subsidized tuition is too high. The institution of a Tuition Advance Fund would remove an important obstacle to educational opportunity for such students. Even more important, the provisions of this plan would make it simple to index state-sector tuition to the cost of living without imposing any immediate new cost on state-sector students. Tuition increases to meet new economic realities, now a potentially explosive political problem for the institutions of the state sector, could become routine. Without a measure of this sort, the state taxpayer is going to reach a limit that will prevent the academic enrichment of state institutions. They will have to turn to alternative sources of funding; the Tuition Advance Fund is an alternative source that is fully in keeping with our commitment to equal educational opportunity. It would be reasonable to allow for a substantial measure of equalization in tuition among the various state systems before applying the 10 percent cap I have suggested for tuition. With such a mechanism, the institutions of the state sector would be able to share the burdens of inflation with their students. Tuition advances would be fully portable and would further save the states from the problems that will otherwise be presented if they are required, as now appears likely, to treat all students but out-of-state freshmen as state residents.

In return for a temporary federal program costing a little less than twice what we now spend on pet food, we could establish a means to make the full price of tuition in any institution available to any serious student, no matter what his financial background. We could ensure that the average person paid for the higher education of no one but himself, and that no one for whom higher education proved a fiscal delusion would have to pay for it.

Although it is a proposal that is radically different from the way we do things now, it is far closer to our values than the present way. We should not be put off because the approach seems different. If we are serious about those values, we will give very careful consideration to the idea of a Tuition Advance Fund.

Financing Our Values: Considering Appropriate and Acceptable Trade-offs

Glenn Terrell
President
Washington State University

The major assumption underlying the theme of this meeting is that the resources for financing and managing higher education will remain stable during the 1980s in the face of increased demands for improved services. While there is abundant evidence in recent history to support this assumption, by no means is it absolutely certain that our resources will actually level off or drop. Also, I believe that planning for stable resources increases the probability that we shall not experience an increase in allocations for people, buildings, equipment, and other facilities necessary to meet society's demands on postsecondary education.

It occurs to me that we should have two plans for postsecondary education in the 1980s--one assuming stable resources (which I confess at this writing seems likely) and another that assumes increased support. The latter plan will keep us working toward increased resource allocation for higher education (which I still believe we can achieve with improved strategy), while the former will prepare us for the consequences of a possible failure of our efforts to convince society that postsecondary education needs and deserves a greater share of the nation's resources.

In a sense, then, I regard the object of this conference as one designed to develop a backup plan, useful only if we should not convince the people of our nation of the need for more resources.

Given the important theme of the conference and the nature of my assignment, however, I shall in a moment proceed to share some thoughts with you regarding some of the planning priorities that I see for the 1980s, assuming stable resources. But first, one more caveat, please. Planning in education today is fraught with all sorts of errors, because of numerous interacting unknowns, such as uncertainties surrounding budget allocations from federal and state sources; dramatic alterations in social needs; rapidly changing student values and interests; and increasing restrictions on tax advantages for voluntary giving.

Lewis Mayhew comments on the uncertainties of planning in higher education: "Planning for the future is a necessary and desirable activity. It serves as evidence to administrators and managers that they are functioning effectively. It provides work for the new specialists--academic planners can occupy some faculty and student time which might otherwise be devoted to mischievous activities."

Dr. Irving Shain, Provost of the University of Washington and Chancellor-elect, University of Wisconsin, Madison, speaking of the frustrations of the long-range planner brought about by the many uncertainties that beset him, asserts somewhat facetiously, "I'm sure that academic planning is the single most useless activity currently taking place in institutions of higher education." This warning serves only to remind us that any plan for the 1980s that is developed in 1977 must be updated soon in the light of changing social conditions and demands. It would be my recommendation therefore that NCHEMS schedule a follow-up meeting for 1979 for the purpose of reexamining the conclusions reached at this meeting, if, indeed, we do reach definite conclusions.

Having revealed to you my nervousness about planning today for the 1980s, I must admit that despite the difficulties in modern-day educational planning, it must be done. I welcome the opportunity therefore to share and exchange viewpoints with you today on planning for the 1980s.

Educational planning, financing, and management during difficult fiscal times are much more complex than when resources are plentiful. With scarce resources, hard decisions about priorities must be made more often and under heavier pressures than when we have abundance. Frequently, with planning under conditions of stable or declining resources, programs must be scaled down or cut entirely, especially if new, needed programs are to be added. It is during such times that it becomes particularly important for us to finance our values (as suggested by my topic) in the face of multiple demands. Since values differ widely among the various constituencies of higher education, the problem of molding decisions regarding the values to be financed by a particular institution becomes exceedingly complex. I shall not dwell on the educational or political complexities of campus planning. Rather, I shall simply discuss what I consider to be some of the most important programs to be either instituted or continued during the 1980s. I believe most of the values reflected in the following discussion will hold--whether seen from the perspective of the public or the private institution, or the liberal-arts or the land-grant college or university. On the other hand, there are obvious interactions between the values reflected herein and the specific type of institution. It would not be surprising if my comments reflect both my liberal-arts-college undergraduate experiences and my land-grant-university professional life.

The most obviously important value we can hold for higher education is reflected in our insistence that our programs, regardless of the number, be of high quality. Quality is, of course, hard to define and measure, and a precise treatment of this concept is the topic for another conference. We define quality programs here as those that meet an acceptable standard established by the appropriate component of the national or regional higher-education community. It is absolutely imperative that we not permit anything to erode the essential quality of our programs--not multiple demands for specific programs, the shortage of resources, enrollment demands, excessive costs of increasingly burdensome government regulations, or anything else for that matter. To maintain acceptable quality levels in programs we do maintain is certain to mean that we must, with increasing frequency, eliminate or scale down some commitments we regard as less important. I believe, however, that we must resist being forced to choose between excellence and degree of access. In a democracy, anyone capable of completing an appropriate program in an institution beyond the high school should have that opportunity. In the language of my topic, there should never be a trade-off between quality and access, even though we may be forced to give the students fewer choices of programs than they now have.

I am troubled by recent data which show a drop in the percent of minority students admitted to American higher-education institutions, suggesting that we do indeed have a continuing problem of access. It is morally imperative that we take whatever steps are essential to restore the upward trend of minority-student admissions. To accomplish this will necessitate increased financial aid, the minimizing of tuition and fee increments, appropriate revisions of educational programs, and changes in the general educational and social climates of our colleges and universities. It required a major upheaval in the 1960s and early 1970s to bring about improvements in conditions for minority students, faculty, and staff. I hope we can continue to address the needs of minority students during these times of relative calm. It is particularly important that we do so.

While the percent of women being admitted to college is still increasing, we need to give much greater attention to the recruitment of women (and minorities) to our graduate schools, if we are to supply the pool of minority and women professionals necessary to meet our own commitments and the guidelines of federal, state, and local affirmative-action programs.

Quality and access, discussed briefly above, are general values that we must continue to finance in the 1980s and beyond. There are a number of more specific values that are equally compelling.

First, we simply cannot fail to appreciate the basic core of education in our very legitimate preoccupation with preparing students for specific jobs or other assignments in our society. For it is the disciplines of the liberal arts and sciences that provide students with an appreciation of the (1) civilizations of the world; (2) human history of accomplishments and failures; (3) political, social, educational, and economic institutions; and (4) scientific systems by which knowledge has been advanced.

Also, without the liberal-arts core, it would not be possible for our educational system to produce the leaders so needed to solve the complex problems that exist in the world today. Further, the liberal arts and sciences imbue the human intellect and spirit with an appreciation of the beautiful, the aesthetic, and other values that tell us so much about human progress and add so much to our personal enjoyment. I am concerned about a society which moves too far in the direction of vocationalism in its commitments. Two or three years ago, I was worried about this trend. Today, I am glad to say that I think I see the trend reversing, as evidenced by an increasing support for the arts and the humanities and for basic research in the sciences. I base the last statement on the increase in the federal government's support for the arts, humanities, and science foundations.

A good case can be made for the propositions that the decade of the 1980s has the potential for producing a stronger America and world, or that alternatively, we shall see the gradual or perhaps even precipitous decline of modern society. It is clear that in the 1980s we shall reach a crucial point in the sharp decline of natural resources, such as energy and water, or alternatively, we may solve these problems through appropriate conservation measures and research programs. By the end of the next decade, our cities will have solved many of their problems of housing shortages, unemployment, pollution, and crime, or these problems will have reached a level so severe as to threaten the very fabric of society. I believe that our elementary and secondary schools will have deteriorated drastically by the 1980s, or alternatively, they will have improved sharply because of successes we will have experienced in strengthening them.

On a more global scale, we will have found more effective ways to resolve international conflict, or we could very well be plunged into another world war, a terrifying prospect indeed. Unresolved racial conflict could, in the 1980s, plunge the nation and the world into a state of disarray never seen before.

The 1980s have the potential for producing serious, even catastrophic health problems if the environment continues to deteriorate, or alternatively, we may create a cleaner world and find solutions to diseases that threaten human life. We have, too, the choice of continuing and renewing our efforts to solve the world food problems or of witnessing the horrors of increased famine and malnutrition.

All of the above problem areas relate to our natural resources, including human resources, in some manner or form. It is my contention that of all the special values to which higher education should carry a continuing commitment, those associated with identifying, developing, and preserving natural resources should rank at the top of the list.

Accordingly, the strongest special imperatives facing postsecondary education today include the need to continue the commitment to these--the survival issues of modern society. Such programs must compete successfully for increasingly limited funds against other values, or there will be national and international problems of such a compelling nature as to threaten the continued progress of society. We simply have no choice but to obey these imperatives by establishing more effective programs of instruction and research in the following areas: (1) new sources of power and energy; (2) more effective methods of power and energy conservation; (3) new food sources and distribution systems for a hungry world; (4) solutions for the debilitating and destructive diseases and health problems of people and animals; (5) an understanding of the basic components of human conflict, interpersonal and international; (6) more effective programs in our K-12 public and private school systems, programs that are based on newly discovered principles of learning and personality development; (7) control of air and water pollution; (8) control of delinquency and other crimes; and (9) understanding of the processes of human social development.

One might legitimately ask the question, "What will be eliminated in order to focus our attention on all of these programs?" This is a tough question--one that must be answered in terms highly specific to the institution, with the understanding that not all of the programs listed above can be offered at all institutions. With the exception of the undergraduate liberal-arts core program, a division of labor between colleges and universities will be increasingly important if we are to finance the imperative programs in the 1980s. Responsibility for the socially relevant programs must be shared in such a way as to reduce costs and increase quality and access. Such a collaborative effort can be done, as WICHE and similar regional consortia have repeatedly demonstrated most effectively.

As mentioned above, institutions of higher education must also eliminate programs--a chore that is very nearly impossible for a college, since to do so frequently means the elimination of people who have dedicated their lives to the programs being eliminated.

I would like to return to a point made earlier--that because the main assumption of this conference is that we shall have stable resources and increased demands in the 1980s, it is essential to finance our values (and presumably some low-valued programs). I do not believe that it is possible to finance the values that have been advanced herein without increased resources, even if we assume economies brought about by some program elimination and the sharing of resources with each other. Support for the programs mentioned herein, while maintaining quality throughout the system, in my judgment, is not possible. Accordingly, the only alternatives (both negative) I see to securing additional resources are the reduction of quality of some programs and the limiting of access. Consequently, to be repetitive, I see one of the major assumptions of the conference to be a potentially dangerous one--perhaps a self-fulfilling prophecy. I guess I conclude that we cannot afford to plan for the 1980s, assuming stable resources. Too much is at stake. For this reason, I urge NCHEMS to develop a plan for a conference on strategies for increasing public support for higher education, in order that we may be able to finance the values necessary to ensure our survival.

What Do We Do about It?

William Ford
Chairperson
House Subcommittee on
Postsecondary Education

I understand your theme for this meeting is "Planning, Managing, and Financing Postsecondary Education in the 1980s." And that is quite a tall order. The difficulty the Congress is having in passing the appropriations bill containing the federal funds for postsecondary education for fiscal year 1978 has caused me to wonder recently just how we are going to plan, manage, and finance postsecondary education for the remainder of the 1970s.

I also understand that you would like me to discuss the future of the federal government's role in postsecondary education. Many people ask me just what I anticipate the federal government's role will be. They ask, "Will it expand? Will it change its focus? Or will it just stay the same?" They also ask, "Will it be more concerned with the needs of institutions? Will it be more concerned with research? Or will it focus primarily on the needs of students?"

One educator recently suggested that the federal government concern itself more with the "substance" of postsecondary education. He expressed his desire for the federal government to acknowledge a growing need to preserve the capability of our colleges and universities to offer a "well-rounded" education. And he expressed his particular concern over a continuing decline in our institutions' ability to maintain strong liberal-arts programs. This educator implied that the federal government should concern itself with this phenomenon and should perhaps consider a way of providing assistance to help institutions bolster their liberal-arts programs.

I found this kind of suggestion particularly perplexing, because most of the educators with whom I talk suggest--and very often in quite strong terms--that the federal government should not concern itself or in any way interfere with educational policies and programs. In fact, a basic premise which all of us on the Committee try to keep in mind is that institutions of postsecondary education must retain their independence--that the federal government must respect institutional integrity.

So when someone asks me a question like, "Should the federal government be concerned with a 'well-rounded' education or should it focus more on a career or vocational-oriented education?" I answer by saying that this is something which more appropriately should be decided by individual institutions and individual students.

Perhaps these kinds of questions were best answered by an educator for whom I have a tremendous amount of respect. U.S. Commissioner of Education Ernest L. Boyer, who also served as Chancellor of the State University of New York, recently wrote:

> While the college curriculum in this country has properly become rich and varied, that is no justification for random course selection by students. Educational institutions are supposed to have some significant purposes of their own, some goals beyond creating catalogue listings that read like mental menus. The colleges' sense of purpose was seriously shaken by the campus turmoil of the 1960s and early 1970s, and the problem has been compounded by financial fears on many campuses today. But unless educators are willing to tell the emerging generation that they have little idea about what matters anymore, colleges and universities must seek to redefine the threads of common experience that bind us together.

> To do this, campuses would have to recreate some common core curriculum. This, it should be emphasized, does not mean that we need a national curriculum, and such a suggestion from the U.S. Commissioner of Education certainly is not intended to indicate that the federal government should legislate the contents of education. Colleges and universities themselves must make these decisions.

If the question can be simplified, perhaps it could be phrased something like this: "What is a proper role for the federal government to play in postsecondary education--deciding and influencing educational policies and priorities, or providing educational opportunities and access?"

A quick review would indicate that the federal government's role historically has been somewhat like a pendulum, swinging back and forth between institutional assistance and student assistance.

The Morrill Act--written over one hundred years ago--provided federal assistance for institutions. The federal emphasis shifted after World War II to massive student assistance with the advent of the G.I. Bill.

In 1958, after the launching of Sputnik, which made higher education one of the top priorities in Washington for a fleeting moment, Congress wrote the National Defense Education Act, which provided both institutional and student assistance. In 1963, the pendulum swung back, perhaps for the last time, towards institutional assistance, when we enacted the Higher Education Facilities Act.

Finally, in 1965, Congress wrote the Higher Education Act. This act, with all its subsequent amendments, has established a funding mechanism which demonstrates very clearly that the federal government's primary concern today is with providing educational access and opportunity in the form of various student-assistance programs. The five major programs are the Basic Educational Opportunity Grant program, the Supplemental Educational Opportunity Grant program, the National Direct Student Loan program, the Guaranteed Student Loan program, and the State Student Incentive Grant program. These five programs alone account for approximately 90 percent of all the funds appropriated for programs authorized by the Higher Education Act.

In addition to these program for which approximately $2.7 billion was appropriated in fiscal year 1977, two other major student-assistance programs accounted for over $5 billion in the 1977 budget--veterans-education benefits ($3.6 billion) and social-security benefits ($1.45 billion).

According to the Congressional Budget Office, the federal government spent approximately $7.9 billion in student assistance in fiscal year 1977, compared with a total of $4.8 billion which went to institutions in the form of research contracts, categorical aid programs, and construction loans.

A recent document published by the Congressional Budget Office (Postsecondary Education: The Current Federal Role and Alternative Approaches, February 1977) tells us that "during the past five years, federal support for higher education not only has grown 40 percent, but has also been increasingly directed toward support of students, rather than colleges and universities. In Fiscal Year 1977, nearly 70 percent of the federal budget for higher education represented direct aid for students, indirect aid provided through the schools they attended, or tax expenditures designed to help parents pay the costs of higher education." It is my feeling that this trend will continue to grow in the 1980s--despite the longstanding traditional needs of institutions and despite new needs brought about by the energy crisis and court decisions and laws relating to the rights of handicapped persons.

There just does not appear to be any sentiment in the Appropriations Committee of either the House or the Senate for any increase in institutional aid today, and I do not detect any hint of change in the foreseeable future.

An example of this problem may be best illustrated by our experience with the "Trigger" provision in the Education Amendments of 1976. This provision was intended to provide some minimal amount of institutional aid after the appropriations for student assistance reach the preceeding year's level. Basically, what it requires is that once the student-assistance appropriations reach the previous year's level, one dollar must be spent for one of three institutional programs (Title I, Community Services and Continuing Education; Title VII, Construction, Reconstruction, and Renovation of Academic Facilities; and Title X, Establishment and Expansion of

Community Colleges) for every two dollars spent for student aid (over and above the previous year's figures). Despite the existence of this language in the law, the Administration ignored the requirement in its budget request, and both the House and the Senate voted to adopt an appropriations bill containing language to specifically ignore the "Trigger" language. As a result, only one of these three titles (Title I, Community Services and Continuing Education) received any money ($18 million), while appropriations for the student-assistance programs authorized by the Higher Education Act were increased by over $500 million.

There are two other trends that I think are appropriate to bring to your attention today.

One of them is the growing realization, at least by our subcommittee, and I believe by the full Education and Labor Committee as well, that the student of today is much different than the student we were talking about when we wrote the Higher Education Act in 1965.

The House report which accompanied the Education Amendments of 1976 made this very clear when it told us that:

> The "typical student" is no longer young, no longer full-time, no longer just out of high school, no longer a stranger to the world of work, no longer necessarily seeking either a set of skills or an educational credential. And, to be certain, he is no longer overwhelmingly "he".
>
> The statistics on the demography of academe in the mid-1970s are startling.
>
> The full-time student, looked at by educational statisticians as the norm, is already a minority in the community college sector, and in proprietary schools, and is rapidly becoming so in the rest of the postsecondary scene. In 1970, 29 percent of the total college population consisted of part-time students. By 1974, that had risen to 37.1 percent of the total.
>
> The "college-age" stereotype has already lost its validity. According to Census Bureau figures, less than half of the college-going population in America is between the "college-age" parameters of 18 and 21. To be specific, 48.8 percent are in that age bracket, another 48 percent are

> over the age of 21, and 3 percent are under the age of 18. Perhaps most impressive is the fact that one-third of the total are over the age of 25, and a remarkable 10 percent--nearly 1 million students--are over the age of 35.

It is my hope that the federal government will respond to the changing makeup of the student body by funding new programs designed to provide more opportunities for the so-called nontraditional students. We enacted the Lifelong Learning program as part of the 1976 Amendments. Although it has not yet received any federal funds, I would hope that if there is any chance to make some headway in new institutional funding, it will be for programs such as this.

Finally, I suppose that any talk about federal aid to postsecondary education in the 1970s or 1980s would be incomplete without addressing the one issue that I hear about no matter where I go--the so-called paperwork or "red tape" problem. In fact, despite my earlier comments about what I believe to be the federal government's reluctance to become involved in the substance of educational policy, many of the educators with whom I conversed during the past few years believe that the federal government is indeed becoming involved--by means of a myriad of laws, regulations, guidelines, court decisions and other official communiques from Washington.

I noticed that one of your other speakers, the very capable Mr. Charles Saunders, who directs the Office of Governmental Relations at the American Council on Education in Washington, recently was asked, "Is regulation strangulation?"

He answered by saying, "The question aptly conveys our uneasy awareness that government legislation and court decisions are increasingly influencing the shape of higher education in America. . . . In practice, federal regulations too often impede and subvert the educational process by stifling diversity and imposing costly, burdensome, and unnecessary requirements."

I think Mr. Saunders's concerns are an accurate reflection of the kinds of concerns that so many of us in Washington have been hearing more and more frequently during the past few years.

Before I respond to them by telling you what I perceive to be the new trend in HEW and the U.S. Office of Education, let me first establish one thing. The federal government has not only the right, but the duty, to account for the funds which it spends--no matter what their purpose may be. Thirty years ago, U.S. Supreme Court Justice Jackson stated (in an education decision), "It is hardly lack of due process for the government to regulate that which it subsidizes."

In many cases, regulations are both legitimate and necessary. C. Peter Magrath, the highly respected President of the University of Minnesota, delivered a speech last year in which he stated that

> One could argue that many rules and regulations as they are written and enforced, do not, in fact, constitute the best or most effective way of dealing with the problems they are intended to correct. We are not being fair or smart, however, if we lump virtually all governmental regulations and programs together, and claim them to be collectively suspect.

He went on to say that,

> Most Federal and State initiatives have proved beneficial, despite our frustrations from regulations. As a society, and as individual colleges and universities, we have needed a hard collective kick in the pants in a number of areas of crucial social concern. Government has provided that needed kick, and we are, and will be, better off for it.

With this established, I think it can also be safely stated that there is a new awareness in Washington today of the growing threat of overregulation and I believe there is now present--both in the new Administration and in the Congress--a new determination to decrease the amount of red tape, paperwork, and confusion which has become associated with federal education programs.

President Carter assured college leaders of his intent to alleviate the paperwork burden imposed upon the federal government on February 19 of this year, less than one month after taking office. He has since "directed the heads of executive departments and agencies to combine reports where possible, eliminate unnecessary reports, require less frequent reporting, and share information among agencies themselves instead of asking grantees to provide such information repeatedly."

Secretary of HEW Joseph Califano and U.S. Commissioner of Education Ernest L. Boyer have responded by reorganizing the U.S. Office of Education so that programs can be better managed and regulation writing could be consolidated in one office. They have established a simplified student financial-aid procedure which will eliminate the need for over 2.5 million families to file federal forms and a new procedure for postsecondary-education institutions applying for funds for campus-based programs which should reduce from several weeks to several days the time it takes to prepare the applications.

Most recently, Secretary Califano announced "Operation Common Sense"--a comprehensive effort to review, simplify, and, wherever possible, abbreviate HEW's program and administrative regulations. And finally, just last month, Commissioner Boyer ordered an overall 50 percent reduction in the paperwork that the U.S. Office of Education requires of educational institutions by drastically reducing and limiting the number of reports that Office of Education officials could require.

This is one trend that I am certain will continue. It has become a trend, because educators made their voices heard in Washington, and I would like to commend every one of you for your individual efforts. I am hoping that you will continue to communicate with the officials who represent you in the federal government and that you will continue to tell us what you perceive to be the needs and problems that will be confronting postsecondary education in the next decade.

While I may not be able to accurately predict today what the federal policy will be in the 1970s, I can tell you very confidently that our policy in the 1980s will be a much better one if you continue to tell us what your needs will be.

Research That Will Help

Patricia Graham
Director
National Institute of Education

The most important educational issue we face today is to find the means to increase the educational achievement of all Americans. All other issues, including efficient educational management, are means to that end, and achieving that end is our primary task.

Of course, this task involves a complex set of problems on which we need to focus our best attention for a long time. But it remains essential that we address these problems comprehensively and systematically. Now, as never before, all Americans need greater educational skills in order to have adult lives in which they are both self-supporting and personally fulfilled. Furthermore, we are increasingly skeptical (appropriately so, in my view) of the traditional symbols of educational achievement: the high school, the baccalaureate, and even the doctoral degrees. These awards have lost their previously recognized currency, and we are hard put to explain their current value or significance.

Over the past 50 years, the role of education in our society has changed substantially. In the past, those with minimal educational achievement could secure employment as unskilled labor. Women did not fully participate in the paid work force. Minorities engaged primarily in low-paying occupations that, for the most part, have disappeared. Only a small fraction of the population had graduated from high school (even today, more than a third of those over 25 in the United States do not have a high-school diploma). Only a tiny minority of the population had attended, much less graduated from, college. In 1950, 6 percent of whites and 2 percent of blacks over 25 had attended college for at least four years. By 1975, these figures had risen to 14 percent for whites and 6 percent for blacks.

Many people cite these figures to note how far we have come. I believe instead that these figures tell us how far we have to go. But I do not mean simply how far we have to go in creating wider access to higher education. When combined with our knowledge of current trends in the age, socioeconomic background, and motivation of incoming students, these figures suggest that research must be based on very different assumptions about who our students are than it has been in the past.

The change in the composition of the student population in higher education, together with the changing attitudes of employers, has created a new role for higher-education research. In the past, a bachelor's degree for a man assured entry into a respectable and probably well-paying professional or managerial position. For many, college costs were simply a broker's fee, paid to attain a comfortable and respected slot in the middle or upper-middle class. Furthermore, by stressing the difference in lifetime earnings of men with college degrees compared with those with only high-school diplomas, we in higher education occasionally strengthened the implication that college attendance could be justified principally in economic terms. However, we now find that the continuing validity of some of these characteristics of the past can be substantially challenged.

First, secondary schools and even some colleges and universities now include a good many students for whom school is a trial and academic eminence is elusive. They continue in these institutions either because the law or social mores requires it. Concomitant with this substantial change in secondary and postsecondary populations over the last 30 years have come changes in the work force itself, at both ends of the work spectrum. On the one hand, the number of jobs that do not require conventional educational skills, such as reading, writing, spelling, and arithmetic, has significantly decreased, so that now nearly everyone employed must have these skills. On the other hand, the number of jobs in which people can find both professional and personal satisfaction for an entire lifetime has dwindled. Previously, these jobs went mostly to white college men, and now there are simply not enough of these jobs to go around.

The question, then, is: How do we educate a population for these changed circumstances? We must learn how to raise substantially the level of educational achievement in our population, particularly for those remaining in secondary and postsecondary institutions who would not have done so in the past. At the minimum, they must be assured that they have the requisite educational skills to do a job, and that assurance is no easy task. No large, heterogeneous society has ever before educated its citizenry to such high standards. But today, all industrialized nations recognize the need to extend higher levels of education to greater proportions of their population to satisfy the requirements of a technological society.

In this country, we still have a democratic faith in equality of educational opportunities, a conviction that all segments of our society should be allowed access to the benefits of our educational system. But we don't know how to deliver on this faith. We know that we can no longer justify postsecondary education to a man in terms of access to a fascinating and well-paying career, or to a woman in terms of marriage to a man gaining such access. Such is no longer the case. Our argument for the value of a college education has to rest on more secure foundations than access to interesting jobs. Education or training that simply prepares people for a job and that does not broaden horizons beyond that job is inadequate preparation for life.

It is a tribute to the leadership of our postsecondary institutions that most recognize that problem clearly. But how can the research community be effective in helping institutions address this issue? This seems to me to be the critical research task we face. I want to explore it in some detail.

Traditionally, the role of the federal government in education has been one that recognized the primacy of local and state agencies in establishing and implementing educational policy. It has not been the responsibility of the federal government to determine curriculum or national academic standards, and I believe that is absolutely correct. Nevertheless, the federal government does have a legitimate role in fostering education equity and in supporting research that will enrich and enliven the educational process. I believe that at the National Institute of Education, both of these responsibilities are vital.

First, we must recognize our equity responsibilities. We must be particularly concerned about categories of individuals for whom academic distinction has been rare in the past. We will not resolve this question quickly or easily, but we must keep this complicated issue in the forefront of our attention. If I were to have a quantifiable goal for NIE beyond increasing educational achievement in Americans, it would be to reduce the predictive value of ethnicity, social class, and sex for educational achievement. In terms of access to higher education, this goal raises important questions, ones to be resolved in part by better preparing the underserved at the elementary and secondary levels. For the professional component of higher education, however, the issues are even starker. In the leadership of our higher-education institutions, even more than in our student bodies, we have a very long way to go before we can approach educational equity as I have defined it. At NIE, we are addressing this problem in part with a program for postdoctoral awards to minority and women researchers. That is not enough, but it is a start.

Beyond equity responsibility, what kinds of research will enrich and enliven the educational process? We at NIE tend to divide our research concerns into two distinct types: first, research that enables us to understand the teaching and learning process better and thereby acts to improve it; and second, research that helps us to comprehend how educational institutions organize, govern, and finance themselves, so that their activities can be improved.

Before I explore each of these types of research, I should observe a phenomenon that I am confident is familiar to everybody in this room: that is, the way in which the subject of the teaching and learning process in higher education brings from most college and university faculties and administrations what can best be described as a polite yawn. In elementary and secondary education, both professionals and the public recognize the primacy of teaching and learning. In higher education, many prefer to believe that the college or university transcends pedagogy and deals only with research and scholarly disciplines. I know of very few college or university presidents who, when seeking research funds for their institution, have as a high priority the understanding of the educational enterprise in which they are engaged. Of late, as heavily tenured faculties have become more common, some institutions have begun to be concerned about faculty development, but rarely at the expense of the research dollar that might go to the engineering or physics department or some other vital institute within the university. In short, the research priorities in higher education have been very different from those in elementary and secondary education. And the lumping together in the federal government of elementary and secondary with postsecondary education has given many colleges and universities pause--indeed, more than pause: distress.

After all, colleges and universities must be concerned when their budgets do not balance. Therefore, they have been more receptive to research about educational organization, governance, and finance. The grim reality is the fact that you must keep the place going, regardless of the quality of the educational experience. Partly as a consequence of that fact, much of the research that we at NIE have undertaken in postsecondary education has concentrated on such issues.

Today, I'd like to speak briefly about research in several areas. The figures I cited earlier indicate that we are dealing with a student population bringing new expectations and challenges to the campus. Because of this, I believe higher education will become increasingly willing to subject itself to research about teaching and learning, research that has long been anathema to a professoriate believing mastery of subject matter to be its major goal. But higher education can no longer afford this attitude. From campuses all over the country, we are receiving inquiries about programs in basic skills (although naturally they don't like to call them that). Institutions have expressed interest in what we know about teaching students to read and write. There is even a resurgence of interest in graduate and professional schools in establishing remedial courses in language arts. Since we already know a great deal about how to teach basic skills, I believe that one of our major tasks in higher education will be not research itself, but dissemination--a task that we must take very seriously. Those who have long studied and practiced teaching and learning crafts at the elementary and secondary levels are going to have to help educate their higher-education colleagues about what we already know. It seems to me that the traditional lend-lease pattern that we saw in the NDEA institutes of the 1960s, in which a group of high-school teachers came to learn at the feet of a college professor, may well be reversed. We may well find teachers of basic English courses at colleges and universities, with prestigious Ph.D.'s in comparative literature, taking summer courses from expert high-school teachers who have been successful in teaching youngsters how to read and write.

I think there will also be an increasing demand in higher education for a research agenda that will help us understand what students want from higher education. In different times, such information seemed unnecessary. We knew who our students were and where they were coming from. But, as Congressman Ford has noted, today's student population is very different from that of the sixties.

Many more research areas have arisen, including motivation, values, teaching delivery systems, and evaluation. Recently, Bill McKeachie of the University of Michigan has identified, in some detail, possible NIE research topics in these areas. Besides debate over which topics should be addressed, we can expect considerable energy on evaluating ongoing, innovative projects. Still others favor institutional research support, while others insist that applied policy studies are most rewarding.

I would be remiss if I did not make it clear that there are those who believe that an agency like NIE should concentrate on elementary and secondary education--that we should focus our limited resources and not spread ourselves too thin. I don't accept that. Still, given the demographic factors I've cited earlier, it is clear that higher education is a natural arena for NIE interests in improving access and equity for minority groups and for women. Higher education can provide, if it will, powerful leverage to reform educational practice at all levels, to train leaders for the entire educational system, and to ensure that more highly qualified minorities and women gain access to leadership roles. I believe that the investigations of such questions will be a part of future research in higher education, not because someone in higher education or government will dream up such projects, but because faculty members and institutional administrators themselves will need and ask for such research.

It would, however, be a mistake to leave you with the notion that my reading of the future of research useful to higher education abandons the impressive and helpful work begun in the 1960s and 1970s to make institutions managerially more responsive and financially more viable. Indeed, improved management of our institutions is vital. We need to find the tools, both technical and personal, that will allow administrators to manage their institutions in such a way that teaching and learning, the central activities of higher education, can be accomplished more effectively.

Perhaps it's appropriate at this point to review some of the research on postsecondary education conducted under the aegis of NIE during the past year.

As its first step in the development of a research agenda for postsecondary-education finance, productivity, and management, NIE convened a group of specialists in August 1976 at Keystone, Colorado. The conference was attended by educational leaders and scholars in colleges and universities, research institutes, state and federal agencies, and professional associations. Since the conference, the 50 or so topics that the conferees thought would be useful have been described in papers identifying specific problems. These papers are now in their second draft and will soon be available. The conferees also agreed on nine issues that needed to be addressed: understanding and improving the financial interrelationship among federal, state, and institutional levels of postsecondary education; determining the impact on students of current and proposed systems of financing postsecondary education; understanding and measuring the financial help of postsecondary education; teaching the learning; determining the demands for and goals of postsecondary education from individual and social perspectives; strengthening management capabilities to effect productivity; understanding managers, managerial incentives, and managerial style; developing management information and analytic goals; and understanding organization structures and decisionmaking processes.

Certainly, the Keystone conferees were aware of the diverse and wide-ranging needs of research in higher education. While it is true that the total budget at NIE is limited, we are making some progress in implementing some of these agenda items. However, our ability to implement is limited not only by the lack of funds, but by the fact that we have specific congressional mandates in a number of diverse areas and are charged to serve all levels of education. Nevertheless, we have made a beginning. And I think that few of you would disagree with the contention that our most substantial contribution to higher-education research and development, NCHEMS, so far has been successful. It made sense then, as the Keystone agenda emerged, to use NCHEMS expertise. An example of the work already under way at NCHEMS that can be traced to Keystone is a new study of indicators of institutional health in American higher education. Capitalizing on widespread interest in problems currently faced by colleges and universities in adapting to an environment of little or no growth, NCHEMS has launched a study that, if successful, will move us closer to having a set of early-warning indicators that will show the seriousness of impending financial problems for any given institution or for categories of institutions sharing similar characteristics. Those of us who have had the responsibility for making our institutions go, and keep going, will certainly appreciate the value of an early-warning system.

Such work will continue to be important for us. The need for research about management and finance has in no way diminished. Some claim that the worst predictions of the past have been borne out in reality. Others say that the worst is yet to come. Some are tired of worrying, but all would agree on the continued necessity for useful research in these areas.

We need research that will aid administrators in providing the academic leadership that higher education requires. Information is one important tool in crafting the policies of which leadership is made. The unresolved question for all of us is how to translate information that we may get about our institutions into language easily understood by decisionmakers. That, I think, is a major problem of dissemination not yet solved. However, I think it would be a mistake to assume that such research is the only kind necessary in the higher-education universe. If we solve all our financial problems, if we become perfect managers, and even if (Heaven forbid) we solve all the problems of all the institutional planning and business officers, we will still have failed to address a number of issues crucial to higher education.

No single speech can include all the many areas that make up the broad and diverse field of education. Instead, I've tried, from our perspective at NIE, to suggest directions for the future. The examples I have given do not represent the exclusive interest of NIE, and I hope that all of us can work together to address the enormous problems that we, as educators, confront.

Getting Our Act Together (or How to Keep the Government from Playing the Featured Role)

Charles B. Saunders, Jr.
Director of Governmental Relations
American Council on Education

The program for this National Assembly reads for all the world like an agenda for a decade of ambitious conferences. The topics addressed over the past 24 hours highlight some of the most important problems facing higher education in the 1980s and some of the most difficult choices to be made in pursuit of our value imperatives of excellence, diversity, and access.

And now, in his tidy way, Ben Lawrence has assigned me to summarize: "What do we do about it?"--in 2,000 words or less.

In attempting to answer that question, I will not address any of the weighty issues of planning, management, and financing which were discussed earlier in the program. Instead, I plan to suggest what we can do to pursue our value imperatives with maximum support and minimum interference from the federal government. Like it or not, the federal presence in higher education now looms as a major factor in the realization of our goals. From my vantage point, getting our act together means keeping the government from playing the featured role--and there is something we can do about it.

There is no need here to enumerate the ways in which federal laws and regulations have affected institutional planning, management, and financing. In recent years, the government has involved itself directly or indirectly in the ways we deal with students, hire and retain faculty, construct and renovate our facilities, set academic and administrative policies, and obtain our financial support.

Although we have grown increasingly concerned over these developments, we have been reluctant and uncertain about dealing with them. We have been mainly reactive rather than proactive. We have not worked out a strategy to guide our own behavior. For my part of this program, I will outline some of the elements of a strategy for dealing with the federal presence.

First, we should begin with the assumption that there is no way to get the government out of higher education. Congressman Bill Ford's remarks earlier this morning emphasize this point. While Congress may be increasingly sensitive to the growing burden of regulation and the need to avoid unnecessary paperwork, it is fundamentally concerned with eliminating outright abuses of federal programs and assuring accountability for the use of taxpayers' dollars.

The same point is implicit in NIE Director Pat Graham's discussion of research needs. Despite her recognition that there are limits on what the federal government may appropriately or realistically do, her remarks make it evident that the government is likely to participate more actively in evaluating the effectiveness of current practices and programs in our colleges and universities.

It should be clear, then, that there is no use searching for a magic formula for deregulation, or adamantly insisting that the federal government should not intervene on the campus, however much we may enjoy the rhetorical exercise. The 1980s will surely see a continued, strong federal involvement in higher education. We may resign ourselves to living with red tape, but we must brace ourselves to resist those pressures toward centralization, standardization, bureaucratization, and uniformity, which threaten the diversity that is a fundamental strength of our system.

Proceeding from the assumption that the federal presence is here to stay, we must develop new tools for limiting it.

As a general principle for rule making, we should seek to establish the "test of necessity," which the House Subcommittee on Postsecondary Education wrote into the Education Amendments of 1976. The broad power previously granted the Commissioner of Education to issue regulations was limited in certain instances to authority to issue "such regulations as may be necessary."

We should encourage Congress to apply this test consistently throughout the statutes. This will require some discipline on our part, because many of the detailed instructions written into current regulations were placed there at our request, so that we might know more precisely what the government required of us. In federal rule making, however, we would do well to forego the luxury of certainty. Instead, we should insist that no regulation may require what is not required in the law itself without convincing proof that the requirement is not only desirable but necessary. The burden for justifying any regulation which goes beyond the specific requirements of the law should properly be borne by the federal agency concerned.

Another valuable tool which we should use more frequently for limiting the federal presence is measurement of its costs and benefits. Our most compelling argument for reduction of the regulatory burden lies in the presentation of hard data and analysis of what federal programs cost the colleges to administer. For a community which uniquely prides itself in the search for truth, we have been surprisingly willing to rely on anecdotal complaints as a substitute for the systematic collection of information. We should declare a moratorium on academic rhetoric about the evils of government regulation and apply our expertise in cost-benefit analysis.

The problems of measurement here are challenging, and the conceptual basis for dealing with them is only just beginning to be explored. The Van Alstyne-Coldren study for the American Council on Education a year ago was an initial effort to measure the impact of federal socially mandated programs. Further research in this area is badly needed. For example, we need to know more about the institutional staff effort being devoted to dealing with federal regulatory requirements and to what extent this effort has diverted attention from other important activities. Should such costs be considered inflationary, or do they contribute valuable benefits to society? We also need to make better projections of the future costs of federal programs.

Although many colleges may be unable to mount the systematic research which can answer these questions, every institution has a responsibility to make some kind of informed assessment of what the federal presence means on its own campus. This should be a balanced assessment; too often, we tend to cite the excesses of government red tape, ignoring the important benefits that federal programs may provide. Harold Enarson's discussions of these issues have been notable (and unusual) for the careful effort he has made to enumerate the positive as well as the negative results of federal programs at Ohio State.

In measuring the federal impact, we also need to share our findings and methods of collecting and analyzing the data, so that they can be replicated and compared by other institutions. Better studies will be of double benefit: they will not only make a stronger case for lightening the federal burden in specific areas, but they will also give us better information on the extent to which our own institutional goals are threatened or distorted by federal programs and policies. (I have a recurrent nightmare that the cumulative federal impact may turn out to be greater than the sum of its parts.)

By improving our capacity to measure the impact of federal regulation, we will be in a position to stop complaining about it and start coping with it. But we will not be able to cope effectively until we devise a practical and credible mechanism for self-regulation, not only for our own institutions, but for the entire higher-education community.

I believe that the development of such a mechanism is the only way we can curb the growth of federal intervention. In my own observation of the Washington scene, the zeal of federal bureaucrats to regulate higher education varies inversely with the community's commitment to deal with its own problems. Where standards are clearly established and generally recognized within the community, the tendency of federal officials is to rely on us to enforce our own standards.

The problem is that, in many areas, there are no generally recognized standards on which institutions may base their policies and procedures. These are precisely the areas where the federal government may feel compelled to move in and establish its own arbitrary standards. Thus it is that we now abide by federal standards for hiring of minorities and women, federal standards to protect the confidentiality of student records, federal standards about the kinds of information we must provide our students, and federal standards of academic progress to determine the eligibility of veterans for educational benefits. Legislation was enacted in each of these cases, not because of any congressional desire to punish our institutions, but because of a congressional finding that we were unwilling or incapable of acting on our own to protect an evident public interest.

Further congressional determinations are pending. We have already had a preliminary skirmish over legislation to regulate the use of student activity fees. We have been negotiating with the Office of Education for two years over the question of how to determine whether institutional policies for the refund of tuition and fees are "fair and equitable." We have had extensive negotiations with HEW over auditing standards for measuring the indirect costs of research, while Congress, in frustration over the apparent lack of order in this complex area, periodically threatens to settle the matter by law.

The most vulnerable field for further federal intervention--and the most critical for the preservation of academic freedom--is the private, voluntary accreditation process by which the higher-education community has historically sought to assure educational quality. In the wake of several studies documenting the weaknesses of the system, and of growing concern about tightening accountability for the billions of federal dollars being spent to help students attend postsecondary institutions, the U.S. Office of Education is considering how it can determine which institutions are worthy of attendance.

In this area, most especially, further federal intervention would undermine the foundations of the academic enterprise. The community must act decisively to strengthen its processes for maintaining academic quality and its procedures for assuring fairness and probity of institutional administration and governance.

The Council on Postsecondary Accreditation is already working with the regional accrediting associations and the professional and institution-based higher-education associations to improve the accreditation process. Unfortunately, this effort has not received the support and attention that it deserves from the higher-education community at large.

Too many institutions give scant attention to accreditation issues, because they assume that their own standards are satisfactory, if not impeccable. They are not about to suggest what other institutions should be doing, any more than they would permit others to judge their own policies and procedures. That would be an infringement of their academic freedom, which they see essentially as "we do our own thing, and you do yours, and let's neither of us bother the other." They seem to believe that this comfortable understanding can be maintained forever, and, if they just keep quiet, the federal regulators will go away.

This, I believe, is a grave misjudgment. It ignores the fact that, however high an institution's standards, it cannot escape liability for deficient standards in the rest of the community. When those deficiencies result in scandal, the federal government may come rushing into the vacuum which our laissez-faire version of academic freedom has created and regulate us all. Witness the institutional abuses of the original G. I. Bill, which ended variable tuition payments; the celebrated "red Corvette" case and subsequent newspaper exposes, which resulted in complicated new restrictions on the direct student-loan program; or the isolated instances of misuse of student records, which led to blanket regulation of the way the files are kept at every elementary and secondary school, college, and university in the country.

We need a systematic process for identifying problem areas where there are no generally recognized standards and developing consensus on standards which can be articulated for the entire community. Elaine El-Khawas, in New Expectations for Fair Practice: Suggestions for Institutional Review (Washington, D.C.: American Council on Education, 1976), takes an initial step in this direction, providing a checklist for the review of institutional procedures to ensure fair treatment of students. COPA and ACE are now at work on a further step, a model code of good practice that colleges and universities might adopt as a statement of their responsibilities toward students in eight specific areas: publications, admissions and recruitment, financial assistance, record keeping, instructional programs and requirements, grievance procedures, career counseling and student services, and student conduct.

Obviously, however, no code can be all-encompassing. Nor should it attempt to be, lest we envelop ourselves in chains as we seek to avoid federal handcuffs. Large areas must be left outside of codes, and in these areas, problems will arise from time to time which will make it necessary for the community to respond to new pressures. How can we get our act together to articulate standards in these areas, before the federal government determines them for us?

I propose a simple mechanism. A Commission on Administrative Standards and Procedures should be established, with appointive representation from each of the national higher-education associations. The U. S. Office of Education should have ad hoc membership on the Commission, to represent any government agency experiencing problems in its relationships with the colleges and universities.

The Commission would meet periodically to identify specific problem areas and determine whether standards need to be developed for consideration by the community. Meetings should be public, and any association or individual should be free to attend, submit written recommendations, or request an opportunity to speak.

If the Commission decided that standards were lacking in a given area, it would assign responsibility for development of appropriate standards. Matters affecting educational quality would be referred to the accrediting agencies; issues involving the probity and equity of institutional procedures would be assigned to panels with relevant expertise (that is, registrars, student-aid officers, research administrators, business officers, personnel officers, and so forth). Proposed standards would be placed before the Commission for consideration. If the Commission agreed that the draft proposals were ready for presentation, they would be submitted to the associations for possible adoption.

Such a standard-setting and monitoring mechanism, at best, could prevent the establishment of arbitrary federal standards. At worst, it would enable the community to insist that, if the federal government must enforce standards, they should be those generally recognized by the community. In any case, the initiative for establishment of standards in new and uncharted problem areas would come from the community, and would vastly improve our bargaining strength with would-be federal regulators.

For instance, take the issue of fair and equitable tuition-refund policies. The fact that institutions vary so widely in their policies, and that no accepted standards of fairness and equity exist, instigated the threat of federal intervention in the first place. I am convinced that the USOE concern in this area would vanish if we could demonstrate that criteria for judging fairness and equity had been established.

Another example is the issue of measuring the indirect costs of research. Protracted negotiations have been conducted with HEW on this matter of such vital interest to the research universities. Progress has been made, through a tedious process of reacting to HEW's proposed regulations. If our arguments persuade the Department officials that our objections are valid, they may return months later with a partial concession and other proposals, and negotiations would begin all over again. If we had had a process for taking the initiative to develop community standards for the measurement of indirect costs in the first place, we might never have had to sit down at the negotiating table. We could have simply presented the standards that the federal government could expect at any institution engaged in contract research.

The self-regulating mechanism I have proposed requires no massive effort on our part--only a commitment to establish our own standards wherever they are needed. This does not mean that we must all subject ourselves to the lowest common denominator or the highest. It should be possible to develop different standards for different kinds of institutions. It should also be possible to avoid any encyclopedic code of conduct for every conceivable situation that may arise. True, we must be willing to surrender a small part of our institutional autonomy in order to strengthen the autonomy of the community as a whole. The alternative is constant risk that the federal government may decide our standards for us.

I have suggested a strategy which would apply the test of necessity to all proposed regulations, marshal our academic expertise to measure the real burden imposed by regulations, and commit our best efforts to strengthening the process of self-regulation. If we get our act together, we can at least minimize federal intervention in the educational enterprise. And, by strengthening our capacity to regulate ourselves, we can foster a deeper respect for our value imperatives, and for the role of higher education, in society at large.